FLINT

WOOD BURNING STOVE

Installation & User Manual

FLINT 5 | FLINT 5 WIDE | FLINT 8

Model codes Z2001 | Z2101 | Z2201

BEFORE YOU START

Read this first

Please read this user guide carefully before assembling, installing, operating or maintaining your stove. Keep this manual for future reference and pass it on to any new owner of the appliance.

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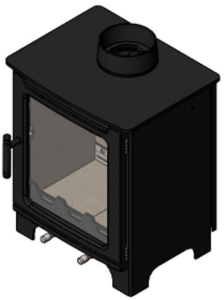

Important safety summary

- Installation must comply with all applicable local regulations, including those referring to Building Regulations and relevant national and European standards, including BS 8303.
- Stove and chimney installations must be carried out by a two-person team, one of whom is a qualified, competent person (e.g. a HETAS installer); or by a competent person with the work inspected by a local building control officer.
- This appliance must not be installed into a chimney shared with any other heating appliance, and must not be used as an incinerator or to burn household waste.
- A carbon monoxide detector must be installed in the same room as the stove. It should comply with current requirements and include a battery suitable for the life of the detector, to BS EN 50292. The installation of such an alarm is not considered a substitute for regular maintenance or servicing of the appliance or flue system.
- A suitable fireguard should be used where appropriate, especially in the presence of children, the elderly or the infirm. The fireguard should be manufactured in accordance with BS 8423 (fireguards for use with solid-fuel appliances).
- Ensure no soft furnishings or combustible materials are susceptible to heat radiating from the appliance.
- External surfaces become hot during use. Use suitable protective gloves.
- **Always observe the minimum separation distances to combustible materials specified on the data plate.**
- **Only burn recommended dry, seasoned wood fuel with a moisture content below 20%.**
- **This appliance is a wood-burning appliance suitable for intermittent use.**
- **Do not use aerosol sprays on or near the stove when it is in use, as this could result in explosion or flash ignition.**
- **Do not make unauthorised modifications to the stove.**
- **In the event of a chimney fire:** close off the air supply to the stove, move combustible materials away from the stove, evacuate the building and call 999. Following a chimney fire, the chimney will require a full inspection before being used again.
- **Under no circumstances should the stove be operated for extended periods with the fire door left open. This will result in over firing and may lead to severe damage to the stove and flue system.**
- **Ignoring these warnings and the details within this user manual could lead to injury or damage to persons and/or property.**

REGULATORY

Smoke control areas

Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, furnace or any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an “unauthorised fuel” for use within a smoke control area (unless it is used in an “exempt” appliance from the controls which generally apply in the smoke control area).

In England, appliances are exempted by publication on a list by the Secretary of State under sections 20 and 21 of the Clean Air Act 1993 (as amended by section 15 of the Deregulation Act 2015). In Scotland they are exempted under section 50 of the Regulatory Reform (Scotland) Act 2014; in Wales and Northern Ireland by regulations made by Welsh Ministers and by the Department of the Environment respectively. Your local authority is responsible for implementing the Act, including designating and supervising smoke control areas. Further information: www.gov.uk/smoke-control-area-rules.

Suitable authorised fuels can also be used in appliances in Smoke Control Areas (see Authorised Fuel List https://smokecontrol.defra.gov.uk/fuels.php).

The Flint range has been recommended as suitable for use in smoke control areas when burning wood logs with a moisture content of 20% or less. The Flint range must be fitted with a permanent stop preventing closure of the secondary and tertiary air intake.

SMOKE CONTROL STOP SETTINGS

The smoke control limiter establishes the minimum secondary / tertiary air opening. The setting must not be adjusted when the appliance is being used in a smoke control area burning wood logs. The smoke-control stop (on the base of the stove) should be positioned so the secondary / tertiary air control is set at: Flint 5 = 7.0 mm open · Flint 5 Wide = 8 mm open · Flint 8 = 9 mm open.

MODEL REFERENCE

The Flint range

Consumer name	Model code	Nominal output	Format
Flint 5	Z2001	5.0 kW	Compact
Flint 5 Wide	Z2101	5.0 kW	Wide body
Flint 8	Z2201	8.0 kW	Wide body / higher output

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INSTALLATION REQUIREMENTS

1.1 Appliance location & clearances

The stove must be located at specific distances from its surroundings to prevent heat damage to nearby products and furnishings, and adequate space must be provided for servicing. Furniture and combustible materials must always be kept the required distance away.

There must be a minimum clearance of 150mm each side & back of the appliance, with 350mm clearance above and in front of the appliance, to provide sufficient space for heat to dissipate to room space and to allow access. If a wooden beam is present then a minimum distance of 460mm (preferably 600mm) should be maintained. A protective shield may be required for the mantelpiece or beam in some situations.

Distance to combustibles	Flint 5 (Z2001)	Flint 5 Wide (Z2101)	Flint 8 (Z2201)
Front	1100 mm	1300 mm	1200 mm
Side	500 mm	350 mm	400 mm
Back	275 mm	350 mm	270 mm
Hearth temperature	>100°C	>100°C	>100°C

Minimum distances to combustible materials — always check against the appliance data plate.

1.2 Ventilation

Your stove requires ventilation to supply air for combustion and to ensure that flues and chimneys operate properly, so that products of combustion are safely dispersed to the outside air. Permanent air-opening requirements are given in section 2.4.

Extraction fans can lower the pressure in a building and cause spillage of combustion products from an open-flued appliance; this can occur even if the appliance and the fan are in different rooms. An extractor fan should not be fitted in the same room as the stove, as this can cause fumes to be drawn back into the room. If mechanical extraction is present or unavoidable, the suitability of the installation must be assessed by a qualified installer and appropriate flue-draught / spillage testing carried out before use.

1.3 Handling and Safety information

Special care must be taken when installing the stove such that the requirements of the Health and Safety at Work Act are met. Suitable facilities must be available for loading, unloading and site handling. Take care when handling metal parts during installation or maintenance to avoid personal injury. The stove contains no harmful materials such as asbestos, but appropriate protective equipment should be used where installation work / environment creates risk. 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.

2.1 Chimney

The chimney must be fitted in accordance with the manufacturer's instructions and the relevant Building Regulations. The chimney height and terminal position should conform to Building Regulations and all local regulations, including those referring to national and European standards.

The chimney must be in good condition, dry and free from cracks and obstructions. The flue diameter should not be less than 125 mm at any point and not greater than 200 mm. The minimum chimney height should be 4.5 m, and a 150 mm diameter flue is recommended wherever possible for safety margin and performance. If these requirements are not met, the chimney should be lined by a suitable method.

When using a liner, a 5" / 125 mm flexible flue liner suitable for use with solid fuel may be used with these appliances, provided that users only burn well-seasoned or kiln-dried wood logs with a moisture content below 20% and the appliance is operated fully in accordance with the wood-burning instructions. A 6" / 150 mm liner is always preferable where possible.

The chimney must be swept and examined for soundness and suitability before the appliance is installed. Where the chimney has previously served an open fire, the higher flue-gas temperature from the stove may loosen deposits that were previously firmly adhered, creating a risk of flue blockage; it is therefore recommended that the chimney be swept a second time within a month of regular use after installation.

If there is no existing chimney, either a solid-fuel-compatible prefabricated block chimney or a twin-walled insulated stainless-steel chimney to BS EN 15287-1, suitable for solid fuel, may be used. These systems must be fitted in accordance with the manufacturer's instructions, Building Regulations and all relevant standards including BS EN 15287-1. New masonry and flue-block chimneys, metal system chimneys and connecting flue pipes must meet the requirements of Building Regulation Document J.

Access must be provided (e.g. via a soot door) for cleaning the flue and chimney where they cannot be reached through the stove with the baffle removed.

Please check the suitability of the fireplace and/or surround for use with this appliance before installing it. If in any doubt about the suitability of your chimney, consult your local installer, dealer or chimney specialist before installation.

Fig. 1 — Stove shown with the door open.

2.2 Flue draught

A flue draught of minimum 1.2 mm to maximum 2.5 mm water gauge may keep the appliance in good performance. If the flue draught exceeds 2.5 mm, a draught stabiliser must be installed to control the rate of burning and prevent overfire. Check flue draught when the fire is on high output.

2.3 Chimney connection

An existing fireplace opening should be bricked up or sealed with a register plate. A short length of flue pipe of minimum 125 mm internal diameter may then be used to connect the stove to the chimney and should conform to Building Regulations. Ensure the pipe end is no closer than 76 mm to the side or rear chimney walls. The length of any horizontal run of flue pipe must not exceed 150 mm, unless otherwise confirmed by the appointed technical authority and installed in accordance with the relevant Building Regulations and manufacturer's instructions. A flue calculation to BS EN 13384 may be required.

All connections between the stove and chimney flue must be sealed and airtight. Both the chimney and flue pipe must be accessible for cleaning; if parts cannot be reached through the stove, a soot door must be fitted.

2.4 Air supply

The room or space containing this appliance will require a permanent, unobstructed air opening as detailed in the table below. Please refer to Building Regulations Document J for the correct size calculation; the opening should be at least 3625 mm^2 where a draught stabiliser is fitted. Due consideration should be given to the air requirements of any other appliance in the same room or space, and any air opening must be kept clear from blockage or obstruction.

Air permeability ($m^3/h{\cdot}m^2$)	Flint 5 (Z2001)	Flint 5 Wide (Z2101)	Flint 8 (Z2201)
≥ 5	Not required	Not required	Required
< 5	Required	Required	Required
If a draught stabiliser is fitted	Required	Required	Required

2.5 Material clearances and hearth

The appliance can be recessed in a prepared fireplace, but a suitable free-air gap must be left around the sides, top and back for performance and rear access. The back wall of the recess and the hearth should be non-combustible; the hearth should be at least 25–30 mm thick and comply with current Building Regulations. The appliance shall be installed on floors with adequate load-bearing capacity; if an existing construction does not meet this, suitable means (e.g. a load-distributing plate) shall be used.

The hearth should extend 400mm from the front of the appliance with at least 150mm to the sides. The stove door when open will extend the hearth.

2.6 Commissioning and handover

Allow suitable time for fire cement and mortar to dry. Light a small fire first so smoke and fumes are drawn up the chimney, and do not run at full output for at least one week. After commissioning, the installer should leave the instructions and tools, explain correct use and fuels, and also warn the user about the risk of injury from hot surfaces, especially where children, elderly or infirm persons may be present.

2.7 Installer handover & compliance

The installer should provide the user with a certificate of compliance for insurance purposes, and should cover safety, the CO alarm, recommended fuels, lighting, refuelling, what to do in the event of a chimney fire, troubleshooting, maintenance, chimney sweeping by a competent chimney sweep, annual servicing and recycling.

Fig. 2 — Firebox, baffle and internal linings, shown with the door open, with the supplied door handle.

IMPORTANT WARNING

Operation with the door open can cause excess smoke. The appliance must not be operated with the door left open except as directed in this guide. Operation with air controls or dampers left open can also cause excess smoke.

3.1 Important information

All local regulations, including those referring to national and European standards, must be complied with when installing the appliance. This appliance is not suitable for installation in a shared flue system. The firebox and ashpit cover should be kept closed except during ignition, refuelling and removal of residue, to prevent fume spillage.

3.2 Air controls

Parts of the appliance, especially external surfaces, will be hot when in operation; protective gloves should be used when operating the controls.

Fig. 3 — Air controls at the front lower edge: **Primary (Boost)** left, **Secondary (Air Wash) / Tertiary** right.

3.2.1 Primary air (left-hand control)

Primary air is controlled through the assembly on the bottom of the door and provides a conventional draught through the fuel bed. The primary air intakes can be adjusted to control the fire in the combustion chamber.

3.2.2 Secondary air (air-wash) & tertiary air (right-hand control)

The appliance is fitted with an air-wash system to help keep the heat-resistant glass clean. Tertiary air is supplied via the upper air-inlet holes at the back of the stove. The secondary and tertiary air are controlled together through the right-hand fitting at the bottom of the stove. When lighting, open the secondary / air-wash / tertiary control fully as directed in section 4.

3.3 Burning wood

Refuelling intervals at nominal heat output will be approximately 45 minutes. Wood or logs must not touch the baffle plate. Wood burns most efficiently with the primary air controls closed and the secondary control partially open; moving the secondary control will control the burn rate. Only use dry, seasoned wood with moisture content below 20%. Wet or unseasoned wood causes tar deposits in the stove and chimney and will not produce satisfactory heat output.

3.4 Refuelling on to a low fire bed

If there is insufficient burning material in the fire bed to light a new fuel charge, excessive smoke emission can occur. Refuelling must be carried out onto a sufficient quantity of glowing embers and ash so the new charge ignites in a reasonable period. If there are too few embers, add suitable kindling first. A suitable tool can be used to distribute the embers evenly.

3.5 Fuel loading by model

Never exceed the maximum fuel load for your model. Overloading may damage the product and cause unstable burn conditions, and excess smoke.

Model	Model code	Maximum fuel load	Maximum log length
Flint 5	Z2001	1.2 kg	290 mm
Flint 5 Wide	Z2101	1.2 kg	370 mm
Flint 8	Z2201	1.8 kg	450 mm

RECOMMENDED FUELS

- Split and dried logs, properly seasoned, with less than 20% moisture content.
- Eco logs suitable for closed wood-burning appliances.
- Kindling: 8–12 sticks, approximately 1" / 25 mm in diameter.
- Seasoned wood: 2 logs per load, approximately 3" / 75 mm in diameter. Seasoned wood should have been cut, split and stacked in a location that is covered and ventilated on all sides, for at least a year; wood from an approved source may still need some drying to remove surface water before use.

FUEL QUALITY MATTERS

Wet or unseasoned wood — or using the stove irresponsibly — may cause it to emit smoke, which is illegal in smoke control areas. It also causes tar deposits in the stove and chimney, blackens the glass and cuts heat output. If in doubt, use fuel certified "Ready to Burn". Do not burn liquid fuels, petro-coke or bituminous house coal; use of these fuels will invalidate the warranty.

1. Open the door and ensure the secondary / air-wash control lever is fully open.
2. On first lighting, use 2–3 firelighters with wood kindling built in a pyramid above them to obtain a good fire bed.
3. Ignite the firelighters, close the door and allow the kindling to ignite until the embers are glowing.
4. Add the recommended fuel and control the stove as advised below. Burn small loads initially (during the first week at least), to allow paint, rope glue and fitting cement to cure. Allow the stove to cool fully before opening the door during this initial week of gentle firing.

4.1 Controlling the stove when burning wood

- **Air-wash / secondary air control** — use this to control the fire when burning wood.
- **Primary air control** — normally closed when burning wood once the fire has caught, as wood does not need air from below to burn effectively.
- Avoid overloading the appliance, as this may damage the product and cause unstable burn conditions, and excess smoke.
- Do not leave the stove unattended while lighting.

4.2 First fires

Expect a slight odour as the paint cures during the first few fires; ventilate the room. Do not run the stove at full output for at least the first week after installation.

4.3 Refuelling

Open the primary air control when refuelling onto a quantity of glowing embers and ash, until the next fuel load has caught. Failing to do this can cause the stove to slumber, which is detrimental to performance and can cause excess smoke and chemical condensate, leading to soot and tar deposits.

4.4 Ash removal

When excess ash has built up on the base of the firebox (covering the front grille or the primary air-inlet holes at the back of the stove), it should be reduced. Allow the ash to cool sufficiently to be removed safely, then scoop it up with a suitable tool and place it in a steel ash carrier.

4.5 Environmentally friendly burning

Avoid turning the appliance down to the point where you cannot see any visible flames. This can cause the combustion gases not to be burnt off properly, leading to condensation in the flue system, smoke polluting the surroundings and an unpleasant smell.

5.1 Stove body & glass

Use a soft brush to clean the stove once cooled; renew the finish with proprietary stove paint if needed. Clean the glass with a proprietary cleaner when cool. Wet logs on hot glass, badly aimed pokers or slamming the door can crack the panel.

5.2 Baffle plate & ceramic rope

Remove and clean the baffle plate once a month to avoid soot or fly ash blocking the flueways. Inspect the rope around the door and glass; if it becomes detached, reattach it with proprietary rope glue, and replace it if in poor condition.

5.3 Flue and chimney

Keep the chimney, flueway and flue pipe swept regularly by a competent chimney sweep — for wood, at least twice a year. If fitted in place of an open fire, sweep again one month after installation. If the appliance is left unused for a prolonged period, give it a thorough clean and leave the controls open; before using it again, have a competent person check the chimney for obstructions — i.e. get the chimney swept before the start of the heating season.

5.4 Annual service

The appliance should be serviced at least annually by a competent person. Authorised replacement parts should be ordered as required.

Remove all internal components e.g. log retainer, firebricks, top baffle. Clean them with a soft brush carefully and inspect them for damage. Sweep the chimney / flue system. Clean down the internal surfaces of the appliance using a scraper or wire brush. Inspect these surfaces for damage / corrosion. If corrosion or damage is found, we advise that you consult your chimney sweep about rectification / repair. Brush out or vacuum the inside of the appliance and re-fit internal components.

Inspect the glass door sealing rope. Clean the glass with a non-abrasive cleaner. If the door sealing rope is torn or damaged, we recommend that it is replaced to ensure that no products of combustion enter the room when the appliance is used. Painted finish — wipe the stove with a damp lint free cloth. Repair any light damage with stove paint.

Problem	Probable cause	Recommended action
Fire difficult to light	Green / wet wood	Use recommended dry fuel.
	Insufficient air	Open air controls as directed.
	Insufficient draught	Check flue is not obstructed; sweep if needed.
	Fuel too large	Use smaller, split logs and kindling.
Fire burns too quickly	Too much air	Reduce air controls.
	Excessive draught	Install draught stabiliser / damper if required.
Smoke on initial lighting	Cold flue pipe	Burn small fuel loads to preheat the flue.
	Insufficient seal	Check the rope seal around the glass and door.
Smoke while burning	Insufficient draught	Check flue is not obstructed.
Glass blackening	Insufficient air	Open air-wash control.
	Damp fuel	Use recommended dry fuels.
Low heat output	Poor quality fuel	Use recommended fuel.
Glass crazing (minute splinter marks on glass)	Cold liquid hitting warm glass	Replace the glass.

Applies to Flint 5 (Z2001), Flint 5 Wide (Z2101) and Flint 8 (Z2201).

TROUBLESHOOTING

Fume emissions & adverse weather

PERSISTENT FUME EMISSION MUST NOT BE TOLERATED

Properly installed and operated, this appliance will not emit fumes; occasional fumes from de-ashing and refuelling may occur. Persistent fume emission is potentially dangerous and must not be tolerated. If fume emission persists, take the following immediate action.

1. Open doors and windows to ventilate the room.
2. Let the fire go out, or safely eject and dispose of the fuel from the appliance.
3. Check for flue / chimney blockage and clean if required.
4. Do not attempt to re-light the fire until the cause of the fume emission has been identified and corrected.

Adverse weather conditions

Varying weather can affect how the stove burns, especially wind. An anti-downdraught cowl might need to be fitted (speak to a specialist), or a flue damper may help. Mist and fog can also affect chimney draught — you may need to change the settings you use, or burn a smaller amount of wood.

Appliance	Flint 5 (Z2001)	Flint 5 Wide (Z2101)	Flint 8 (Z2201)
Test standard	BS EN 13240:2001 + A2:2004 — room heater fired by solid fuel		
Fuel type	Seasoned wood	Seasoned wood	Seasoned wood
Output (nominal)	5.0 kW	5.0 kW	8.0 kW
Efficiency	84.4%	83.9%	79.3%
CO at 13% O_2 (vol%)	0.08	0.10	0.08
NO_x at 13% O_2 (mg/Nm^3)	94	98	99
OGC at 13% O_2 (mg/Nm^3)	63	77	58
Dust / PM at 13% O_2 (mg/Nm^3)	23	11	16
Flue gas temperature	249°C	233°C	297°C
Flue gas mass flow (mean)	3.3 g/s	3.8 g/s	5.9 g/s

Product Fiche — Regulation (EU) 2015/1186.

ENERGY EFFICIENCY (ERP)

Model	Flint 5 (Z2001)	Flint 5 Wide (Z2101)	Flint 8 (Z2201)
Energy efficiency class	A+	A+	A
Direct heat output (kW)	5.0	5.0	8.0
Indirect heat output (kW)	0.0	0.0	0.0
Useful efficiency at nominal output	84.4%	83.9%	79.3%
Seasonal efficiency, nominal (wood)	74%	74%	69%
Energy Efficiency Index (EEI)	112	112	105

Optional clip-in multifuel grate kit

An optional clip-in multifuel grate kit is available for the Flint 5, Flint 5 Wide and Flint 8. Only use the approved grate kit specified for the appliance model. Fitment, operation, fuel suitability and maintenance instructions must follow the manufacturer-approved instructions supplied with the kit.

The multifuel optional grate user manual must be kept with this manual for the life of the stove.

Fig. 4 — Flint stove fitted with the optional clip-in multifuel grate kit.

Fig. 5 — Flint stove without the multifuel grate kit fitted.

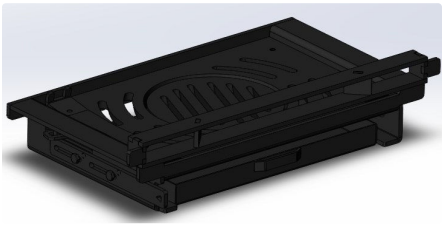


Fig. 6 — Clip-in multifuel grate kit component.

Optional direct external air intake kit

An optional direct external air intake kit is available for the Flint 5, Flint 5 Wide and Flint 8. Where fitted, use only the approved kit specified for the appliance model. The kit must be installed by a competent person in accordance with the manufacturer's fitting instructions and all applicable installation requirements. See **www.flintstove.com** or contact your local Flint / Midtherm dealer.

REGULATORY

Minimum secondary / tertiary control setting

The smoke control limiter establishes the minimum secondary / tertiary air opening. The setting must not be adjusted when the appliance is being used in a smoke control area burning wood logs.

Flint model	Factory-set minimum opening
Flint 5	7 mm
Flint 5 Wide	8 mm
Flint 8	9 mm

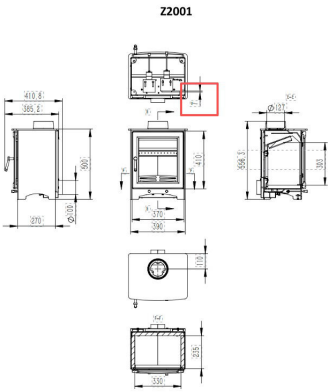


Fig. 7 — Technical drawing showing the location of the factory-set minimum secondary / tertiary air-control opening.

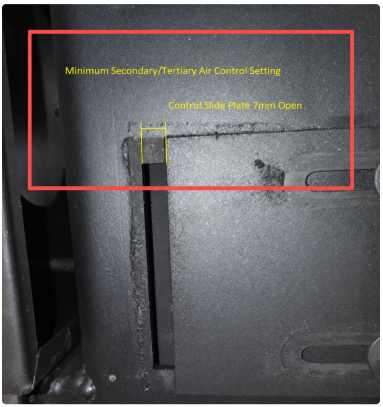
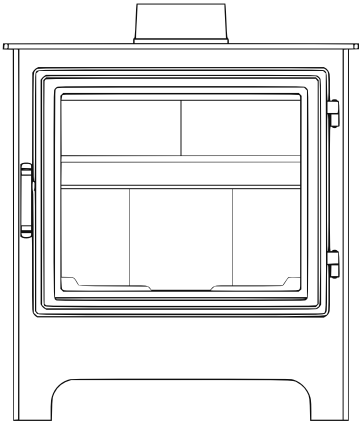


Fig. 8 — Physical example of the minimum secondary / tertiary control setting. The image shown is the 7 mm Flint 5 setting; Flint 5 Wide is 8 mm and Flint 8 is 9 mm.



Appliance	Height	Width	Depth	Weight	Collar	Max Length
Flint 5 (Z2001)	500 mm	420 mm	386 mm	65 kg	5 in / 125 mm	290 mm
Flint 5 Wide (Z2101)	560 mm	560 mm	386 mm	87 kg	5 in / 125 mm	370 mm
Flint 8 (Z2201)	560 mm	560 mm	386 mm	87 kg	5 in / 125 mm	450 mm

The centreline distance from the top spigot to the back of the top of the stove = 110 mm on all models.

SUPPORT

Warranty, spares & installer information

For support, warranty, spares, installer information and downloads, visit **www.flintstove.com** or contact your local Flint / Midtherm dealer.

Keep your proof of purchase and note your model code and serial number (see the dataplate on the rear of the appliance) before contacting support.

Warranty — applies to the firebox only; other parts of the appliance are considered consumables. Incorrect installation, operation or maintenance will invalidate the warranty. Retain your purchase and maintenance receipts (work carried out by a qualified professional) and provide them with any warranty claim.

Recycling — to dispose of the stove after the product life has expired, separate the parts into appropriate material groups. Always dispose of parts as sustainably as possible, in line with current environmental-protection and reprocessing / recycling requirements.

www.flintstove.com

FOR YOUR RECORDS

Notes

Images, illustrations and technical drawings in this manual are for illustrative purposes only and may differ from the actual product supplied. Specifications, dimensions and appearance are subject to change without notice as part of our policy of continuous product improvement. Always refer to the data plate on your appliance for the exact specification of your model. Errors and omissions excepted (E&OE).

FLINT WOOD BURNING STOVES

Built for warmth, designed for confidence.