Quick Start Guide – Si 12 Boiler Stove

Congratulations on purchasing a Stove Innovations Si 12 Boiler Stove. The stove is designed, manufactured and assembled in the UK using heavy gauge premium quality steel and is fully seam welded with a double skinned rear and top and a compact tube boiler. As a result, the stove will provide a superior level of performance and many years of service if burned in accordance with the following simple procedures.

The full user operating instructions and installation instructions should be thoroughly read and are available to download on our website at www.sistoves.co.uk Full contact details are also available on the website.

Important Information

All parts of a stove can get extremely hot, always use the stove gloves provided when opening the stove, refuelling or using the control levers. If children or elderly or infirm people or pets have access to the stove always use a correctly fitted fireguard made to the relevant British Standard

It is important that the stove is installed by a qualified installer who is a member of a relevant approved competent person scheme for installation of solid fuel appliances such as HETAS of OFTEC, and that the installer is qualified to install wet boiler stoves and systems.

Si 12 stoves are only suitable for installation in open vented indirect systems. The installation guide must be consulted and installation must be carried out in accordance with building regulations and system design in accordance with current best practice guidance.

Basic Operation of an Si 12 Boiler Stove When Burning Wood

- Si12 stove are wood burning or solid fuel stoves. They are designed to burn wood with the insulating tile fitted over the grate bars. The solid slab retains the heat and importantly, allows a thick bed of glowing charcoal to build up underneath the burning logs rather than dropping away through the grate. This is crucial as it causes the logs to burn more efficiently and with intense heat.
- When burning wood with the insulating tile in place, the Si 12 stoves utilise the single long travel control lever, which delivers perfectly balanced pre-heated combustion air to the burning wood and provides precise control over the burn rate and heat output of the stove. The lever is located below the centre of the ash box of the stove. The lever moves from left (the minimum setting) to right (the maximum setting). The primary air control located above the ashpit has no effect when the insulating tile is in place.
- When burning wood, ash will only normally need removing every week or so even with regular use. A thick bed of embers always provides the best fire, the ash only needs emptying when it is well up the front ash retaining panel.
- To remove excess ash make sure the stove is fully cold, (embers can still be glowing next morning inside the charcoal layer). Lift the front ash retaining plate vertically and slide a flat based ash shovel underneath it and scoop up the excess ash. Some ash will remain at the corners and this can be spread out as a thin layer before lighting the next fire.
- Wood must be clean and dry (with a moisture content below 20%). This is now a legal requirement.

- The "flue boost" system is unique to Si stoves and will help to draw smoke and dust up the flue when the door is opened for refuelling. Always open the door slowly to allow the air to enter progressively and avoid a sudden rush.
- If burning wood it is important to avoid slumbering fires as this will result in excessive chilling of the boiler and accelerate build-up of deposits on the boiler surfaces and tubes.

Basic Operation of an Si 12 Boiler Stove When Burning Smokeless Solid Fuel

- **The insulating tile that is in place above the grate bars should be removed for solid fuel operation.** The 4 hard refractory bricks should be fitted in place to protect the area around the grate bars. This allows the ash to fall through the grate bars and operation of the riddling lever to shake ash through the grate.
- With the tile removed, and the hard refractory bricks in place, the stove is ready to burn solid fuel. The fuel must be an approved smokeless solid fuel, **traditional house coal must not be used**.
- When burning solid fuel, both air controls are utilised. The top control located below the ash lip of the stove controls primary air and moves from left (minimum) to right (maximum). This controls the air flowing up through the grate underneath the fuel bed. The lower control located below the ash pit door of the stove controls secondary and tertiary air which flows in through holes in the rear firebrick and down the door glass to provide a super-heated air wash to keep the glass clear. On solid fuel operation some staining of the glass can occur with certain fuels. This can be minimised by keeping the burn rate brisk and not fully closing the lower control lever. This control also moves from left (minimum) to right (maximum).
- Depending on the make and type of smokeless fuel, ash will accumulate much faster than with wood and the ash pan will need checking and emptying regularly and always before the stove is lit. Ash must not be allowed to build up under the grate bars as this will cause them to overheat. To remove ash slide open the ash pan with the tool provided. This should always be done before the stove is lit. If the stove is hot the stove gloves must be worn. The ash should be immediately transferred to an enclosed steel container and left outside to cool. The ash pan must be immediately refitted and closed, making sure the closure panel is fully seated. This is important to prevent overheating.

Lighting the Stove

- With a boiler stove it is essential to light it in a way which heats up the flue and boiler as fast as possible to reduce condensation. This is best carried out with quality fire lighters and plenty of dry kindling. This applies to both wood and solid fuel fires. Plenty of dry kindling will heat up fast and warm the flue. The full user instructions online give detailed instructions on how to light and maintain a wood fire or solid fuel fire. When lighting the control lever(s) should be fully open to the right.
- Initially place a small amount of the chosen fuel in with the kindling and build it up gradually as it becomes established to avoid smothering the kindling.
- A boiler stove is best run with a hot fire to avoid excessive chilling by the boiler. Low or slumbering fires will result in more rapid clogging of the tubes, particularly with wood.

Boiler Tube Cleaning

- **As with any solid fuel boiler appliance it is essential that boiler and tubes are regularly checked and cleaned at least once a week**. This is essential for safe operation as blocked tubes or flues will cause flue products to leak out into the room. It will also maintain the efficiency of the stove. The tubes can easily be inspected and cleaned through the "flue boost" apertures above the firebox.

- Cleaning of the tubes can be carried out quickly and simply through the "flue boost" slots, which are above the firebox and can be accessed when the door is open. Boiler tubes should only be cleaned when the stove is not lit.
- To clean the tubes the door should be opened and the sliding baffle at the top rear of the firebox should be slid forwards by gripping the peg in the centre and sliding the baffle forwards off the locating lugs. It is only necessary to slide it forwards100mm or so and it will rest on the top of the side bricks while cleaning is carried out. This will allow cleaning debris from the tubes to drop down onto the grate and removed.
- Once the baffle has been slid forward, the 8 tubes can be cleaned by pushing the wire tube cleaner into each tube in turn. The tube cleaner should be used to scrub the inside of the tube until it is clean. Regular cleaning makes this a quick and easy operation.
- Following cleaning of the tubes, the "question mark" shaped scraper should be used to clean the rear and top of the tube heat exchanger by holding the wooden handle and turning the tool sideways so it can be passed up behind the tubes. It can then be turned so the handle is pointing forwards and the scraped from side to side to clean the top and rear surfaces of the boiler. This is important to maintain flue operation and efficiency. The flat top edge of the tool can also be used to scrape the underside of the boiler to help maintain heat transfer.
- Once cleaning is completed, the baffle plate should be slid fully back in to position and checked to make sure it is located up against the rear of the firebox. Failure to do this will result in loss of efficiency as hot gases will leak up behind the tubes instead of being drawn through them.
- Any accumulated debris from cleaning can be riddled through the grate and emptied out of the ashpan before relighting the stove.

Our spare parts distributors are Fire Spares Ltd and parts can be obtained from them at:

Fire Spares Ltd, Unit 5 Wharncliffe Business Park

Middlewoods Way, Carlton, Barnsley, S71 3HR

Phone: 01226 715 100

Email: info@firespares.co.uk

Website: www.firespares.co.uk

The rating plate of the stove is located on the rear of the stove. For your convenience we have attached a copy of the appliance rating plate below. Please retain this guide as the rating plate enables correct identification of your stove.

Stove Innovations Ltd, Shaw Top Farm, Upper Hulme Leek, ST13 8UQ

Model: SI12 Boiler

	Wood	Solid Fuel
Fuel Type:		
Nominal Heat Output:	9.9kW	6.4kW
Efficiency (Net):	82.8%	81.9%
Energy Efficiency Class:	A+	D
Mean Flue Gas Temperature:	183°C	204°C
Mean CO_2 Emissions:	8.45%	8.17%
Mean CO Emissions @13% O^2:	0.07%	0.1%
Mean CHXY Emissions @13% O^2:	72mg/m_o^3	19mg/m_o^3
Mean NOX Emissions @13% O^2:	127 mg/m_o^3	86 mg/m_o^3
Dust Emissions @13% O^2:	36 mg/m_o^3	9 mg/m_o^3
Recommended Flue Draught:	10 – 24 pa	10 – 24 pa
Maximum Hearth Temperature:	65K	
Maximum Distance to Combustible Material		
Rear (with twin wall flue adaptor):	200mm	
Side:	350mm	

Serial No: 122310072010

Made in UK EN13240:2001 and EN13240 A2:2004 CE 0608