

OPERATING & MAINTAINING YOUR STOVE



Flue Outlet

The flue outlet is generally situated on either the top or the rear of the stove. Combustion gases leave the stove through this outlet to be carried to the chimney through a connecting pipe. They eventually safely leave the dwelling at the top of the chimney. Building regulations require that all products of combustion are discharged safely to outside.

Throat Plate

Soot can fall down the flue and collect on the throat plate. This needs clearing to reduce the hazard of these deposits igniting and to ensure there is a clear flue way for smoke to leave the appliance.

Fire Brick

Many solid fuel appliances have fire bricks inside the chamber. Its purpose is to help insulate the fire bed, improving the efficiency.

Ash Pan

Most stoves incorporate a pan to collect ashes as they are produced from burning fuel and fall through the grate, allowing them to be easily removed.

Fire Door/Window

Doors should be tight fitting and may have mechanisms to allow adjustment to achieve this. Many will have heat-proof rope seals to aid a gas tight seal. This seal is subject to wear and tear and will need to be replaced when its effectiveness is reduced. Using a stove with its doors open will reduce efficiency and with some designs may result in overfiring and damage to the appliance.

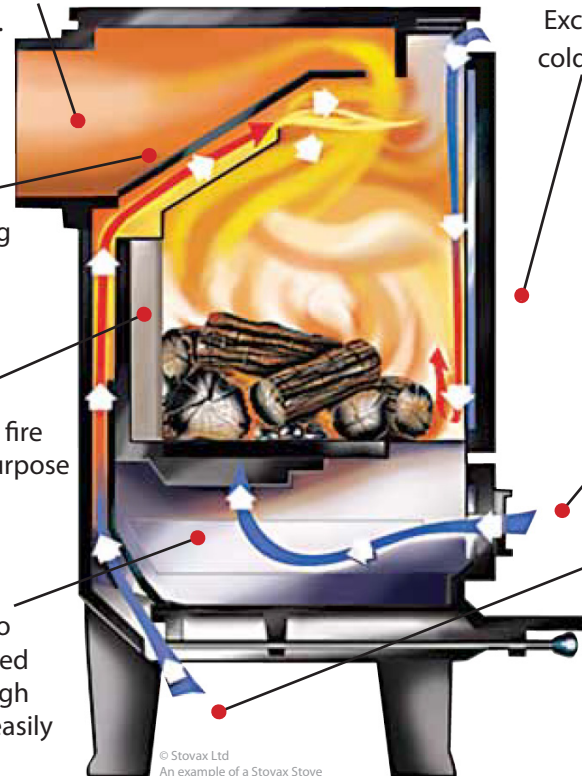
Excess air intake will cool the fire and draw cold air into the house.

Appliance Controls

The main controls on a stove are for regulating the flow of air reaching the fuel which in turn will affect the heat output and the efficiency of burning. Instruction manuals should clearly indicate how to operate the controls to achieve the best combustion and efficiency.

Primary air enters the appliance below the grate and the control is often in the ash pit door. This controls the burning rate of the fire.

Secondary air enters from above the grate and provides oxygen for the secondary combustion of gases and vapours given off during the primary combustion. This helps combustion efficiency so that smoke emission is minimised.



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An example of a Stovax Stove

Always refer to your stove instruction manual in the first instance. The following can be used as general guidance.

Burn Efficiency - What to Look For

An efficient burn of fuel providing heat to the room requires three things:

- **Time** – the burning should have time to happen within the appliance before the combustion air pushes the flame up the chimney where the heat released will be wasted.
- **Temperature** – solid fuel burns efficiently at a high temperature giving rise to negligible smoke. If the temperature is insufficient then much of the potential heating value of your fuel will be lost and increased smoke will be discharged from the flue.
- **Turbulence** – arrange the fuel in a way which ensures the air and combustion gases mix for an efficient burn, taking care to not overfill the appliance.

The flame picture in a healthy fire will be somewhere between:

- **Vigorous flame** just reaching the exit of the appliance (noticeable when getting the appliance up to temperature, but shouldn't be maintained)
- **Lazy flame** that moves across the whole space within the stove (very efficient when up to temperature)

- **Red hot embers** (very efficient, but may need more fuel before the embers die down).

You may find a flue pipe temperature gauge helpful to set the controls for your appliance.

Lighting a wood burning stove	Lighting a mineral fuel stove
1. Start with scrunched-up newspaper or a fire lighter with a small amount of kindling and medium sized logs above - maximum air control.	1. Start with firelighter and a small amount of small sized coal. Set air control to maximum.
2. Once most wood is well alight, add a couple of smaller logs - start reducing the air intake when these are alight (do not fill the chamber).	2. Once fuel is well alight, start building up the fuel in the grate (without overfilling the chamber. Reduce the air intake once the whole bed of fuel is burning well.
3. Maintain the fire frequently with small amounts of additional fuel.	3. Refuel at a frequency that keeps a good bed of red hot coals.

Maintenance Checklist

- **Wood** burns better on a light bed of ash, stoves are designed to allow for this. With **Mineral fuel**, you should empty the pan regularly so as not to allow ash to build and touch the underside of the grate. This would reduce air flow around / through the grate and can lead to overheating of the grate bars and subsequent damage.
- Throat plates to be cleared at least monthly or when recommended to by the manufacturer.
- Replace grate and fire bricks if they become damaged.

Safety Checklist

- Keep combustibles, including logs, at a safe distance from the hot stove.
- Always use the right fuel for the appliance (as recommended by the manufacturer).
- Make sure any external air ventilation grills are not blocked.
- Never leave an open fire unattended without a spark guard.
- Always use a securely fitted fireguard when children are in the house.
- Get your stove serviced annually by a HETAS registered engineer.

Chimney sweeping

Chimneys should be swept **at least** twice a year when burning wood or bituminous house coal and **at least** once a year when burning smokeless fuels. The best times to have your chimney swept are just before the start of the heating season and after any prolonged period of shut-down. If sweeping twice, the second time should be after the peak of the main heating season. HETAS recommends using a HETAS Approved Chimney Sweep: www.hetas.co.uk/chimney-sweep

Fuel

You must use a fuel that matches your appliance, noting that most stoves are not designed to use 'normal' house coal - refer to your appliance instructions and our 'Smoke Control Area' Advice Sheet. With firewood, you will find it easier to light and operate with a dry fuel. Some appliances suggest moisture content as low as 20%. Using dry wood can give up to twice the amount of heat as freshly felled wood, so that is half the amount of logs you need to put on the fire. It is also safer because less tar builds up on the flue and less smoky for your neighbours. For best results, use HETAS certified fuel.

More Information

The Solid Fuel Association consumer helpline.

Tel: 08456 014406

Web: www.solidfuel.co.uk



SIA The Stove Industry Alliance (SIA) provides consumer advice for using stoves on their website.

Web: www.stoveindustryalliance.com

HETAS is the official body recognised by Government to approve biomass and solid fuel domestic heating appliances, fuels and services including the registration of competent installers and servicing businesses.

Tel: 0845 634 5626

Web: www.hetas.co.uk

