

OPERATING & MAINTAINING YOUR STOVE

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Many solid fuel fired appliances are expected to work 24 hours a day, 365 days a year, keeping us warm and supplied with constant hot water.

However, like any other machine, they work better and last longer when correctly installed, burn the right fuel and are properly maintained.

This leaflet will guide you through the basics of owning and running a stove, from a general overview, through lighting your stove, burn efficiency, the fuel to use, to maintenance and safety.

1 Fire Door / Window

Doors should be tight fitting and may have mechanisms to allow adjustment to achieve a good fit. Many doors 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.

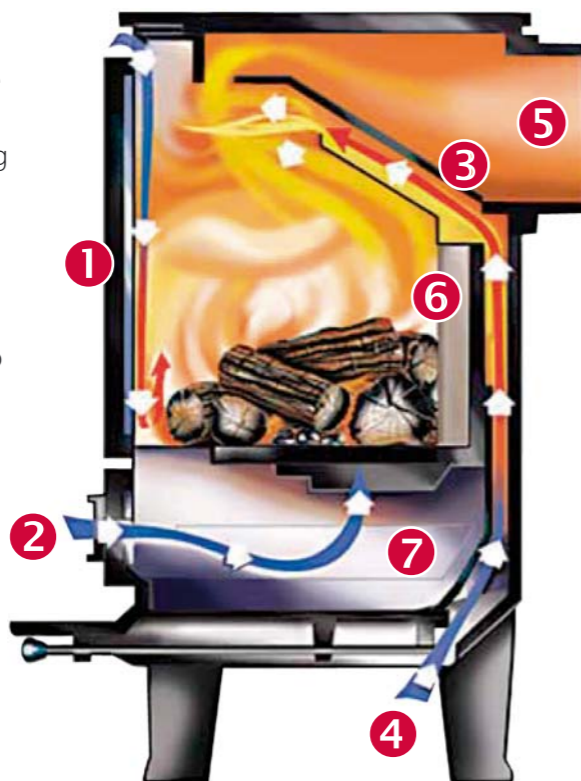
2 Primary Air

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.

Please see your appliance's instruction manual for correct operation.

3 Throat Plate

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



4 Secondary Air

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.

5 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. The gasses eventually safely leave the dwelling at the top of the chimney.

Building Regulations require that all products of combustion are discharged safely to the outside atmosphere.

6 Fire Brick

Many solid fuel appliances have fire bricks lining the floor and walls. Their purpose is to help insulate the fire bed, improving the efficiency by retaining heat. Broken fire bricks should be replaced immediately.

7 Ash Pan

Most stoves incorporate a pan to collect ashes as they are produced from burning fuel and fall through the grate, allowing regular easy removal.

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 usually show how to operate the controls to achieve the best combustion and efficiency.

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

BURN EFFICIENCY - WHAT TO LOOK FOR

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

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.

LIGHTING A WOOD BURNING 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.
- 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 with logs).
- 3 Maintain the fire frequently with small amounts of additional fuel.

LIGHTING A MINERAL FUEL STOVE

- 1 Start with firelighter and a small amount of small sized coal. Set air control to maximum.
- 2 Once the original 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 Add more fuel 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, empty the pan regularly to stop ash building and touching the underside of the grate. This will reduce air flow around / through the grate and can lead to overheating of grate bars and subsequent damage.
- Throat plates to be cleared at least monthly or when recommended by the manufacturer.
- Replace grate and fire bricks if they become damaged.

SAFETY CHECKLIST

- Keep all 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 installer.

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. We recommend using a HETAS Approved Chimney Sweep: www.hetas.co.uk/find-chimney-sweep/

USING THE RIGHT FUEL

You must use a fuel that matches your appliance, remembering that most stoves are not designed to use 'normal' house coal - refer to your appliance's instructions and our 'Smoke Control Areas' Advice Leaflet.

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 Quality Assured Fuel.

MORE INFORMATION

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



www.stoveindustryalliance.com

QUALITY ASSURED FUEL

Find your nearest Quality Assured Fuel producer by calling us on **01242 681270** or visit our web site www.hetas.co.uk/find-fuels/



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