



lighting instructions **H30**

Handöl

LIGHTING IN THE RIGHT WAY

It is important that the correct amount of wood is used, especially when lighting. If you are lighting the fire for the first time you should use a set of scales to see how much 2.5 kg kindling is. Also check what the normal and maximum weights look like.

The tiled stove is only intended for use with the door closed and it is only then that the hot air flushing of the glass surfaces occurs. Always open the door carefully and slowly to prevent blow back because of the changing pressure in the stove.

The function of stoves differs depending on the draft conditions in the chimney. Achieving the correct setting for the combustion air damper usually takes a few attempts. In order to obtain a good bed of embers, there should always be a thin layer of ash and charred pieces in the tiled stove.

Correctly sized wood

Note that if too little kindling is used when lighting, or if the wood is too thickly cut, the fire box will not reach the correct operating temperature. Incorrect lighting can lead to poor combustion with heavy sooting and may result in the fire going out when the door is shut.

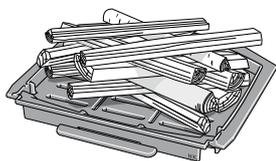
Kindling wood: Finely chopped wood
 Length: 25-35 cm
 Diameter: 3-4 cm
 Weight per lighting: 2.5 kg (approx. 10 - 12 finely chopped pieces)

Feeding Wood: Chopped wood
 Length: 25-35 cm
 Diameter: 6-7 cm
 Normal weight: 1.5 kg/hour
 Max weight: 2.5 kg/hour (3-3 logs per load)

Lighting

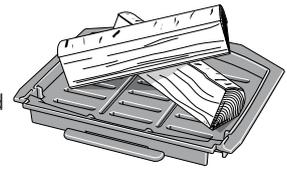
If your house has mechanical exhaust air ventilation you will need to open a window near the stove before lighting the fire. Leave the window open for a few minutes until the fire has caught.

1. Open the controls for the combustion air fully.
2. Place some newspaper or a fire lighter block, and approximately 2,5 kg kindling in the middle of the stove. The wood should be piled alternately across and lengthways.
3. Light the fire.
4. The hatch is set to the lighting position, i.e. the outside of the lower locking hook must lie against the lock reel. If the air gap between the hatch and the body is too large a whirlwind is created in the stove and the flames will hit the side glass resulting in sooting.



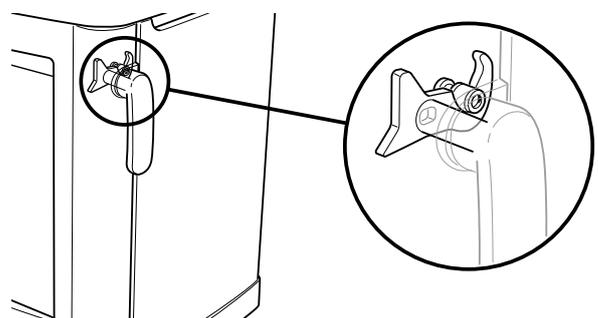
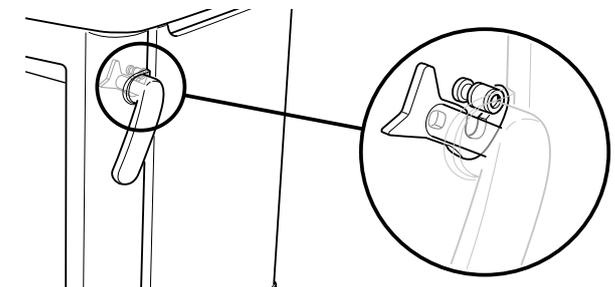
Wood loading

1. Open the door handle slightly and let the vacuum in the firebox equalise for a few seconds before opening the door completely.
2. Add 2-3 logs of a combined weight of approx 1.5-2.2 kg. One log is placed diagonally and one or two logs are placed parallel to the back, see illustration to the right. Then close the door.
3. The combustion damper must be completely open for 3-5 minutes until the logs turn black and catch fire. If you wish for slower combustion, the supply of combustion air can now be reduced. The conditions for controlling combustion vary depending on the temperature in the stove and the draft in the chimney.
4. A nominal output of 5 kW is usually obtained when the combustion damper is 45% open.
5. The lowest output of 3-4 kW is usually obtained when the combustion damper is 30% open and two logs are lit. In this operating mode it is important that the combustion air damper is fully open for the first 3-5 minutes so that the wood has the chance to ignite fully before the supply of combustion air is reduced. A condition of being able to control the heat output is a thick bed of embers and a high temperature in the firebox. When the fire has burnt down to embers is the time to add more wood.



QUICK LIGHTING

It is important that the wood catches fire quickly. Quick lighting is achieved by opening the combustion air damper fully or by leaving the door in the lighting position for a moment. Smouldering, i.e. reduced air supply, results in poor combustion and efficiency with high emission discharges and can, in worst-case scenarios, cause rapid gas ignition resulting in stove damage.



CHOICE OF FUEL

All sorts of logs, such as birch, beech, oak, elm, ash, conifers and fruit trees can be used as fuel in the stove. Different types of wood have different density, the higher the density the higher the energy value. Oak, beech and birch have the highest density.

The wood's moisture content

Fresh wood is about 50 per cent water. Some of the water circulates freely between the fibres and some of the water is bound in the cells. The wood must always be dried so that the free water evaporates. The timber is ready for use when the moisture content has fallen below 20 %. If wood with a higher moisture content is lit, a large part of the energy content of the wood is used boiling off the water. If the wood is damp, the combustion is also poor, layers of soot and tar build up in the chimney and could, at worst, lead to a chimney fire. In addition, it causes the glass of the tiled stove to soot and may cause discomfort to those living nearby.

To ensure thoroughly dry wood, the wood should be cut in the winter and stored, well aired, under a roof. Never cover the wood pile with a tarpaulin to the ground. The tarpaulin will then act as a sealed cover and the wood will be prevented from drying. Always store a small amount of wood indoors for several days before use, so that the surface moisture has time to evaporate.



You must NOT burn the following

Under no circumstances may pressure impregnated wood, painted or glued wood, chipboard, plastic or colour brochures be used as fuel. All these materials can create hydrochloric acid and heavy metals that are damaging both to the environment and the stove. Hydrochloric acid can also attack the steel in the chimney or the mortar in a stone built chimney.

STOVE MAINTENANCE

The glass may become sooty with use, even if the fire is lit with dry wood with a moisture content of 15 – 20%. Wiping with dry paper is often sufficient when cleaning regularly. If the soot has been on the glass for longer it can be removed using cleaning agent or a specific soot removal agent. These cleaning agents can be purchased at your local supermarket or your local stove dealer.

Never use cleaning agents that contain any abrasives, these can damage the glass.

Ensure that no embers remain when removing ash from the stove. The ash must be stored in a fireproof container with a lid for for at least a week before being disposed of.

Soapstone can be cleaned using washing-up liquid or wiped with pure acetone. Do not place flammable objects or candles on the soapstone.

The grate and other cast iron components can be cleaned using a wirebrush.

It is important that the gaskets are checked from a combustion point of view, because worn gaskets reduce combustion because the stove draws additional air.

Because there is a constant flow of air through the stove, cold room air is drawn in and hot air released, dust can gather behind and under the stove. Therefore, one should regularly clean under and behind the stove.

Components close to the centre of the fire may need to be replaced. Examples of such components are the stove cladding and grate. The life of these components depends on how much and in what way the stove has been used.

AVOID TOO LARGE A FIRE

The fire should not be too big. Large fires are uneconomic and also produce high smoke temperatures that can damage the stove and the chimney. The recommended amount of wood is 1.5 kg/hour and the maximum permitted is 2.5 kg/hour and then refers to burning split birch or other broadleaf wood with 18% moisture content. When lighting the same weight of conifer wood, significantly higher stove temperatures are reached. Maximum fire for long periods reduces the life of the stove and exceeding the permitted wood amounts can lead to damage to parts of the stove and the warranty being invalidated.



WHAT DOES THE SWAN MARK MEAN?

- A Swan marked stove affects the environment considerably less than other stoves.
- A Swan marked stove has proven efficient combustion and the whole production process from raw material to waste is taken into consideration.
- The Swan mark places stringent requirements on, among other things, the efficiency and emissions of particles, hydrocarbons and carbon monoxide.
- A fire in an environmentally adapted stove with high efficiency also means lower wood consumption to heat the home.
- The Swan mark makes it easy for you to be part of building a sustainable future.

POSSIBLE CAUSES OF OPERATIONAL INTERFERENCE AND HOW TO RECTIFY THEM

Poor draft in the stove after new installation

- Check the length of the chimney so that it meets NIBE's recommendations, that is a total length of at least 3.5 metres.
- Check that there is nothing in the chimney to restrict the smoke and that no nearby buildings or trees affect the winds around the chimney.
- Check the area of the chimney (applies to existing stone built chimneys), which should be 150-200 cm².

It is difficult to light the fire and the fire dies after a short time

- The wood may not be dry enough, check the wood.
- Another reason is that there may be negative pressure in the house, for example when using a kitchen extractor fan or other mechanical ventilation. Open a window near the stove before lighting the fire. Also try lighting some newspaper and holding it up inside the stove to get the draft going.
- The air supply duct from the outside may be completely or partially blocked. Disconnect the hose and try lighting the fire with combustion air from the room
- Perhaps the combustion air damper is not open.
- The smoke outlet of the stove may be blocked with soot, which can occur after sweeping. Lift the smoke baffle out and check.
- Finally go through the lighting instructions again. Perhaps the amount of kindling was too small and therefore the base embers were too weak and cold to light the next load of wood.

Abnormal amounts of soot form on the glass

There is always a certain amount of soot on the glass and this is added to with each lighting. Soot on the glass is caused by three things:

- The wood is damp, which causes poor combustion and generates a lot of smoke as a result.
- Too low temperature in the firebox, which causes incomplete combustion and poor draft in the chimney.
- Incorrect procedure, the door was not in the lighting position for approximately 15 minutes.

Check the moisture content of the wood, ensure that you have good base embers and go through the lighting instructions once again.

Smoke odour around the stove for periods

This can occur when wind blows down the chimney and most often occurs when the wind is from a particular direction. Another cause is the door was opened when it is burning hard.

Painted parts have become discoloured

If painted parts have discoloured it is due to an excessive temperature in the stove. The reason for the excessive temperature can be that the maximum amount of wood has been used, inappropriate fuel has been used (for example building waste, large quantities of finely chopped off cuts). The warranty does not cover damage of this type.

If a problem occurs that you cannot rectify yourself, contact the dealer or a chimney sweep.

We hope that these words of advice will help you to enjoy pleasant, economic and problem free use of your Handöl stove.

WHEN THE STOVE IS NEW

When the stove is new, a particular smell may be detected, which indicates an oil coating and excess paint on the panels.

After a number of fires the smell will disappear. A particular lingering smell may occur after some use. The smell comes from the insulation in the chimney. This can be relieved by burning wood at 2.5 kg/hour for a period of 5-8 hours.

SWEEPING

Sweeping the chimney ducts and chimney connections should be carried out by a chimney sweep. The stove can be scraped down and/or swept. A soot vacuum cleaner is most appropriate however.

If a chimney fire occurs or is suspected, the combustion damper and the door must be closed. If necessary, contact the fire brigade to extinguish it. The chimney must always be inspected by a chimney sweep after a chimney fire.

Warning

- During operation, certain surfaces of the stove become very hot and can cause burn injury if touched.
- Be aware of the strong heat radiated through the hatch glass.
- Placing flammable material closer than the safe distance indicated may cause a fire.
- Pyre lighting can cause quick gas ignition with the risk of damage to property and personal injury.

NIBE Brasvärme reserves the right to change colours, materials, dimensions and models at any time without special notice. Your dealer can provide you with the latest information.