

Correct firing

Wood furnaces with bottom combustion

Lighting-up without smoke - a new way of lighting-up offers a simple and very effective way of reducing the fire's output of pollutants considerably. With this method, the wood burns uniformly from the bottom up over the whole combustion chamber base. Unlike firing methods used earlier, critical operating states (hollow combustion) are avoided by using this firing method and much lower emission rates are achieved during the whole combustion process.

For which firewood ovens is this lighting-up method suitable?



For log-fired ovens with **downward extraction of the flue gases** (arrows):

- sideways combustion (1)
- rear combustion (2)
- downward combustion (3)



Central heating furnaces

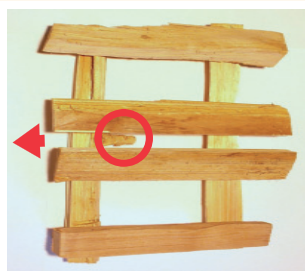


Central heating stoves



Tiled stoves

Procedure for sideways combustion (1)

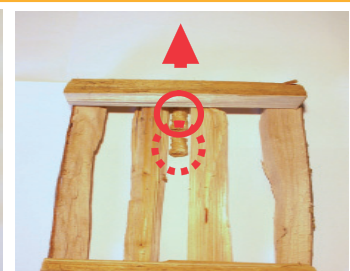


For a low-emission start you need a start-up module. You can make this yourself using dry, maximum 4 cm thick fir wood and a starter (wax-impregnated wood-shavings). The starter should be placed between the pieces of wood (red ring) and directly in front of the aperture through which the exhaust fumes leave the combustion chamber (direction of the arrow).

Preparation: Prepare six logs - two long ones (about the same length as the grate) and four short ones (about the same width as the grate).

Start-up module: Set up the six logs and the starter (ring) as shown above. To aid lighting-up, the starter, along with the two neighbouring split logs, can be pulled forward a little.

Procedure with rear combustion (2)



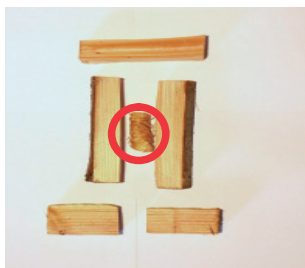
Preparation: Prepare six logs - four long ones (about the same length as the grate) and two short ones (about the same width as the grate). along with 1 or 2 starters.

Start-up module: Set up the logs and the starter (red ring) as shown above. If the starter can no longer be reached after piling up the logs, place a second starter (dotted ring) in front of it. This can be ignited after the start-up module is laid and, afterwards, the remaining wood can be stacked up.

Procedure for downward combustion (3)



Preparation: Four dry fir-wood logs are required with a cross-section of around 4 x 4 cm and a length of around 20 cm along with a starter (e.g. wax-impregnated wood-shavings). One log is additionally halved.



Start-up module: Set up the five logs (halved log in front) and the starter (ring) as shown above. The starter must be placed over the aperture where the exhaust fumes leave the combustion chamber.

Placing and lighting



**Central heating furnace
Central heating stove**



Tiled stove

Leave the charcoal of the previous firing in place. Assemble the start-up module on the combustion chamber floor. Place thin logs directly over it, the thicker ones come afterwards. The starter is lit using a long lighter or match.

Further notes on operation. Please also consult operating manual!

Central heating furnace

- Start-up programs: For a low-emission start, start-up programs are required which reduce the power of the combustion fan after starting. Request that the supplier of the firing system installs such a program.
- Interim solution: If the fire goes out, two starters may be employed and the fan started 3 - 5 minutes after lighting (avoid smoke in the heating room).
- Let wood ash cool well (fire risk) and dispose of along with other rubbish.
- Regular cleaning by the chimney-sweep leads to lower dust emissions.

Tiled stoves / Central heating stoves

- Do not overload the combustion chamber
- Never restrict the fire by closing the air supply or the chimney flaps.
- Only use single logs or wood briquettes when adding further logs to the fire, place these onto well-glowing embers. Do not add logs in storage ovens.
- Close air flaps when hardly any glowing embers can be seen. Close chimney flap if no glowing embers are visible any more.

You can obtain further information from your chimney-sweep and from the competence centres (municipality, canton) responsible.

See also:

www.holzenergie.ch

www.fairfeuern.ch

www.umwelt-zentralschweiz.ch

What can be burned?



- Untreated wood that has been dried over 1 to 2 years in a protected location.
- Briquettes made of untreated wood.
- Tiled stoves / central heating stoves: The maximum thickness of the pieces of wood should be 7 to 9 cm.
- Store firewood for at least a day in a heated room. Cold wood burns badly.



Starters are available from retailers as well as from building suppliers and hobby shops.

What should not be burned?



Starters are more suitable for firing-up than paper. Cardboard, wood from one-way and returnable palettes, boxes, crates, wood from old furniture and building renovation as well as wood from demolition and construction sites should not be used in wood-fired ovens.



Exhaust fumes from such materials damage components in the installation and cause harm to our health as well as to the environment.

The burning of such materials is prohibited.

Smokeless after 15 minutes: Smoke also means fine dust. When correctly operated, log fires burn smoke-free after 15 minutes at the latest. If a wood fire smokes for a longer time, the stipulations of the Ordinance on Air Pollution Control (LRV) are not adhered to. In such cases **the authority responsible can order measurements to be made or other measures to be taken.**

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EnergieSchweiz

Holzenergie Schweiz · Neugasse 6 · 8005 Zürich

Tel. 044 250 88 11 · Fax 044 250 88 22 · info@holzenergie.ch · www.holzenergie.ch · www.energie-schweiz.ch

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