



How to lower  
carbon footprint  
and increase  
energy efficiency  
of your heating  
system

HOW TO BUILD  
A FIRE AND LIGHT IT  
IN A FIREPLACE

3



# GUIDELINE

These guidelines were developed within the BB-Clean project to help the end user. 4 guidelines are focused on the important topic of reducing emissions (PM – particulate matter) when heating with biomass. The correct selection and storage as well as condition of the fuel has a significant effect on the fine particle emission. Moreover, the correct lighting of the stove has a positive effect too.

Correct heating means to lead the produced gases when heating wood through the hot flames. There they can burn completely, and the heat of combustion produces further combustible gases. The following steps show how to properly heat stoves with smoke outlet upwards. This ignition method is suitable for all stoves with smoke outlet to the top, such as fireplaces, room stoves, open and closed fireplaces, tiled stoves or Swedish stoves.

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A video instruction from Austrian Biomass Association can be found on this link:

[https://www.youtube.com/watch?v=RMs6BdvMCeQ&feature=emb\\_title](https://www.youtube.com/watch?v=RMs6BdvMCeQ&feature=emb_title)



## Basic structure

Stack the pieces of wood with sufficient distance of 1-3 cm. Attention, never fill the whole combustion chamber!

## Hint 1

Do not overload the combustion chamber!

## Basic structure

Place small logs, fine split wood sticks and the lighting aid on top. As ignition assistance e.g. at the market available, in wax soaked wood wool pieces can be used. Liquid fire accelerators are not suitable!



## Hint 2

Do not use crumpled, printed paper as lighting aid!

## Light from the top

Open all air passages and ignite the ignition aid



## Hint 3

Use the top down method to light your stove!



## Bright high flames

Bright, high flames burn after a few minutes

## Hint 4

Prepare or buy fine split wood sticks!





## Reduction of air supply

After about 10-15 minutes the air supply can be reduced slightly. Modern wood biomass appliances offer separate primary and secondary air regulators for this purpose. When the fire is well lit, the primary air supply is turned off. The fire creates enough draught and gets enough air through the secondary air supply until the fire is replenished after 45-50 minutes.

### Hint 5

Reduce or close primary air supply after fire is well lit!

## Basic structure

If only the basic embers are left, you can add more or reduce the air supply completely to store the heat. To replenish the heat, distribute the basic embers evenly and lay some logs over the entire surface. The high temperature of the basic embers ignites the new wood in a few seconds.



### Hint 6

Prevent late recharging (indicator: no flames)

# LITERATURE



For more information visit BB-Clean website:

<https://www.alpine-space.eu/projects/bb-clean/en/home>

1. Bundesministerium für Klimaschutz (BMK), „Richtigheizen.at - Richtig anheizen.“  
[https://richtigheizen.at/ms/richtigheizen\\_at/richtigheizen1/richtigheizen\\_anheizen/index.html](https://richtigheizen.at/ms/richtigheizen_at/richtigheizen1/richtigheizen_anheizen/index.html)

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