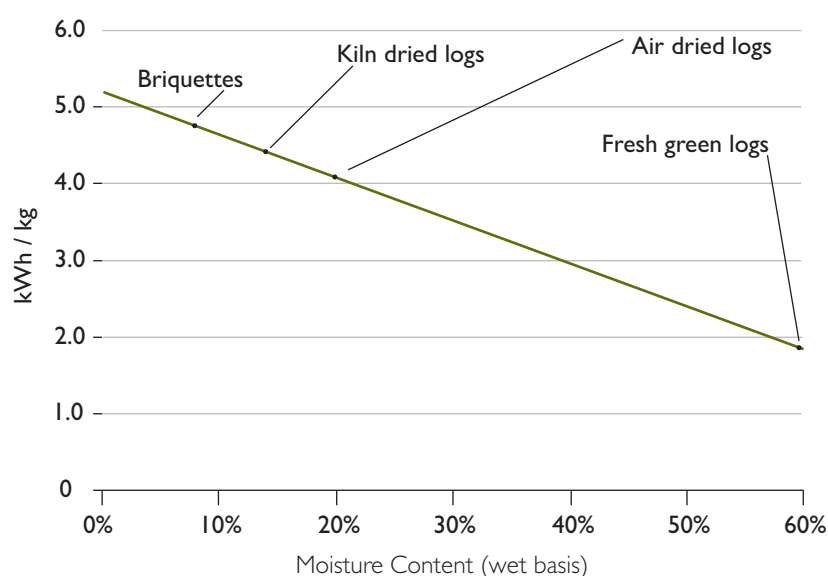


When choosing wood for burning there are two significant factors which have an effect on the net calorific value (CV) or the amount of available heat per unit (volume) of fuel: **Moisture Content & Wood Density**

Moisture Content

The moisture content of wood has the greatest effect on net Calorific Value (CV). Any water in the timber has to evaporate before the wood will burn, and this will reduce the net energy released as useful heat (as opposed to steam up the chimney). Logs that are not dry will result in a fire that smoulders and creates lots of tars and smoke. These tars can be corrosive, potentially damaging the lining of your flue and increasing the danger of a chimney fire. Wet logs will tend to blacken glass in stoves even if the stove is designed to keep the glass clean. Well seasoned logs can have approximately twice the CV of green logs. Always burn dried (seasoned) wood, either by buying it dry, or by buying green logs and drying them yourself. Radial cracks and bark that comes off easily are signs of well-seasoned wood.

Average Calorific Value (CV) vs Moisture



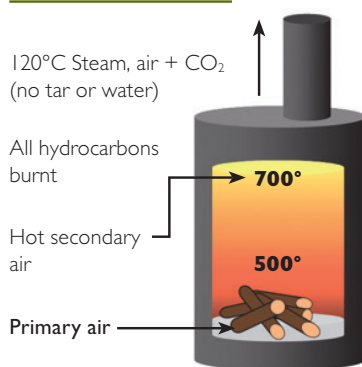
Wood Density

When buying logs, it is common for the seller to let you know whether they are from hardwood or softwood tree species (or mixed). The general difference is that hardwoods (deciduous, broadleaved tree species) tend to be denser than softwoods (evergreen, coniferous species). This means a tonne of hardwood logs will occupy a smaller space than a tonne of softwood logs. Dense woods will burn for longer than less dense woods, this means you will need fewer 'top ups' to keep a log stove burning. If you buy wood by volume you will receive more kilowatt hours (kWh) of heat from a cubic metre (M3) of hardwood than softwood (at the same moisture content).

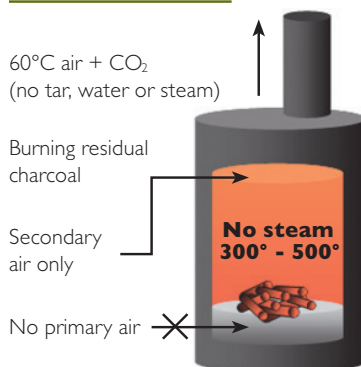
(Bavarian State Institute of Forestry, Leaflet No 12 2003)

Operation

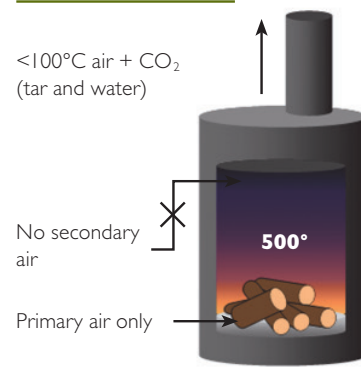
Efficient fast burn, no smoke



Efficient char burn, no smoke



Inefficient slow burn. With un-burnt fuel, lots of smoke



After adding fuel, set appliance to fast burn ensuring all of the gases are fully burnt. Only set to slow burn when all the wood has been reduced to charcoal and ash. Newly added wood set to burn slowly will create smoke and tarry deposits in the chimney. Stoves should not be banked up with logs overnight. A bright fire which has turned wood into charcoal should be left with the day's ash, secondary air and no primary air. Users of older stoves are advised to consult their stove centre about current recommendations on how to achieve the best results.