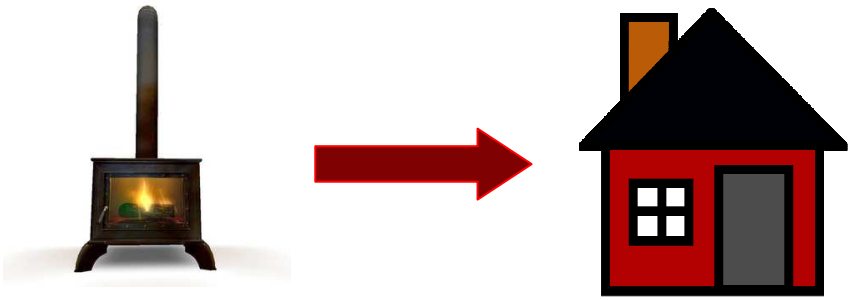
mira dryer

HOME BIOMASS DRYER

If the wood is no dry, never mind it's the cheapest renewable fuel, improve the stoves efficiency or adding filters for pollution reduction.

The use of thermal biomass is measured by its heating value, which increases with decreasing amount of water contained in the material.

Biomass drying requires a large amount of heat.
Drying time is lower as higher the temperature and air velocity are.



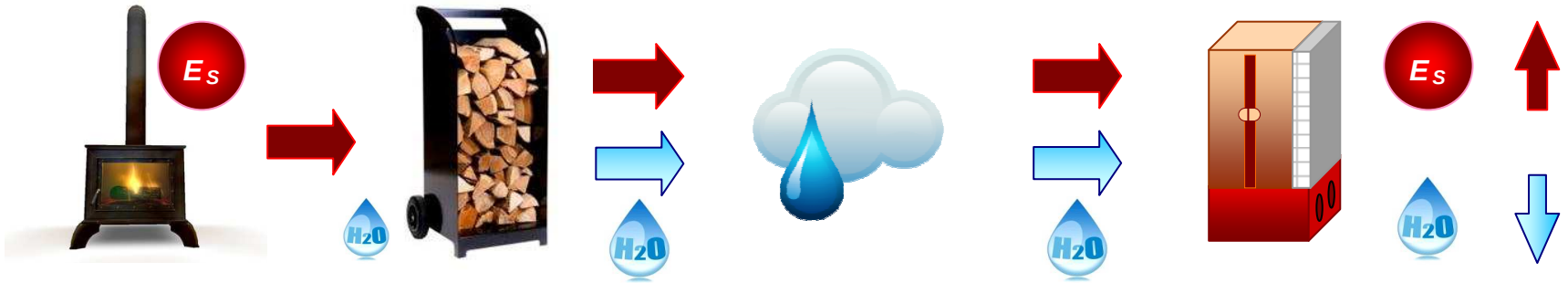
The heaters are heat sources greater capacity and higher temperature available at home.

Biomass Dryer takes a portion of the thermal energy from the stove, (E_S), and used it to evaporate water from the biomass by hot air.

The decrease of the water content in the biomass increases its heating value.

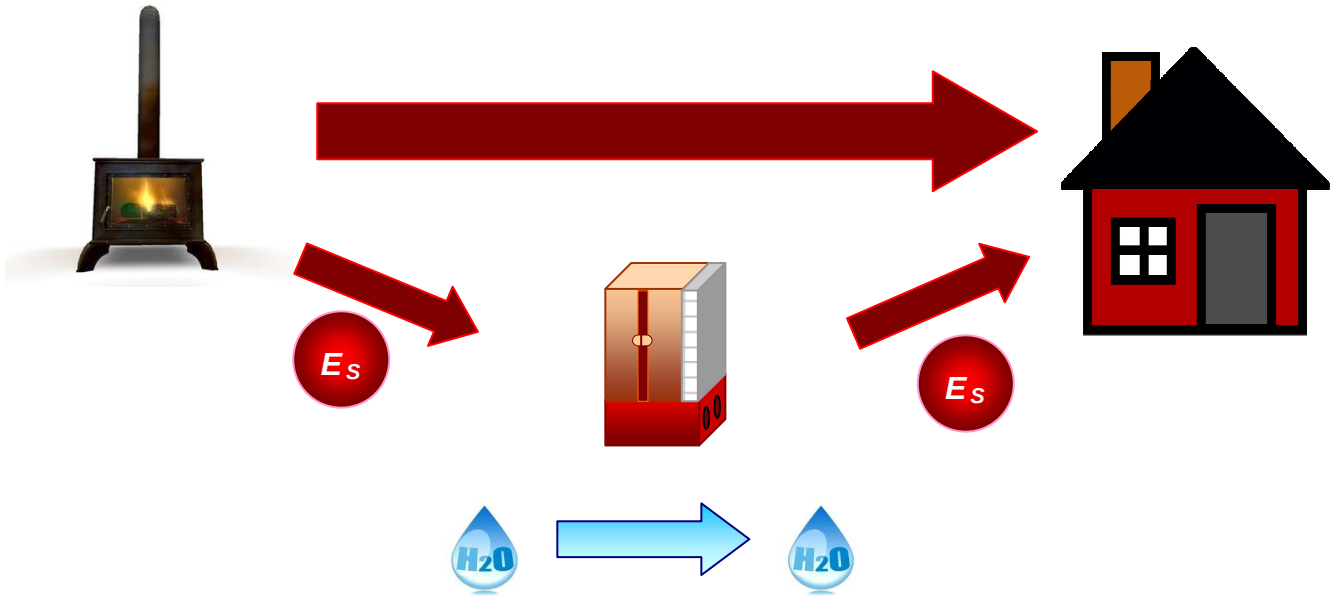
On a natural drying process and largely forced drying methods, the resulting moist air is neglected.

In Mira Drying, a condenser is responsible for returning the energy of moist air (E_S) released in the condensation of steam.



Now the water evaporated from the biomass is in liquid form in the reservoir of the dryer and the energy of condensation sent to the room.

Drying equipment includes a drying chamber, a heat exchanger, a heat accumulator and the corresponding elements of regulation and control needed.

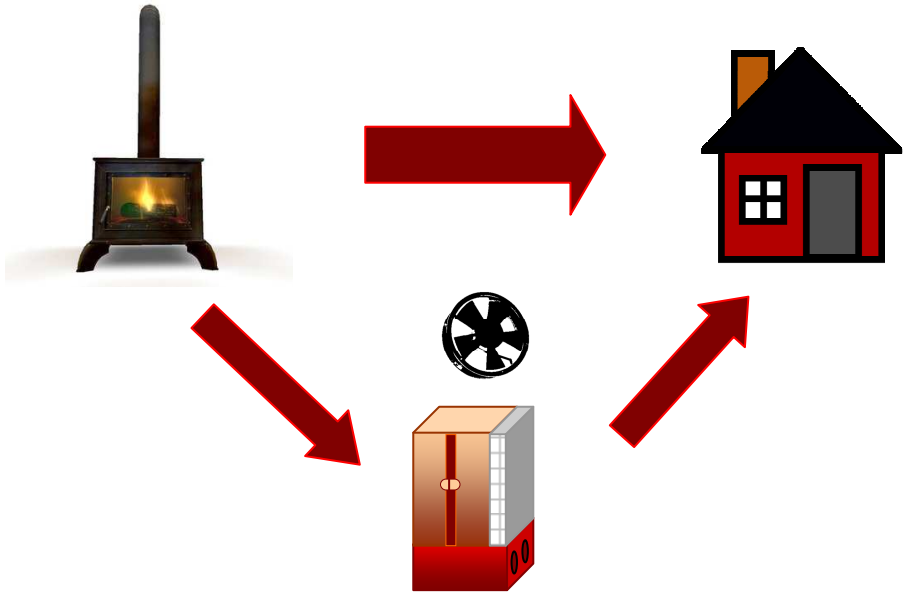


Upon completion of the drying process, all the energy taken from the stove (E_S) is returned to the room, the final destination of the heat generated by the stove.

Final result is a biomass with less water and thus more Calorific Value.

Increasing the Calorific Value is equal to the energy used in the evaporation of water in the drying process (E_S).

The increased Calorific Value is E_S



Since the entire process is conducted within the residence itself, any loss of energy as heat during the process is not such a loss.

Consequently, the only existing energy expenditure throughout the process should be the electrical energy used in airflow, which is generated by the process itself.

In this scenario:

There is no system of air forced drying and high processing speed with higher performance and lower energy costs.