

# ROCKET STOVES

## Around the world

Designed by Dr. Larry Winiarski at the [Aprovecho Research Center](#) in Oregon (United States), the high efficiency Rocket Stove is now widespread in many countries of the world.

For over 30 years, the Aprovecho Research Center (ARC) have been designing and implementing improved biomass cooking and heating technologies in more than 60 countries worldwide. For decades, ARC has been the world's leader in open source development of all aspects of improved cooking stoves. Hundreds and thousands of [Rocket Stoves designed by Larry Winiarski have been made using his technology.](#)

The most common Rocket Stove is used as a hob. Its functionality and easy construction make it an ideal tool to ensure environmental sustainability and also to promote local development. The stove in fact uses recycled materials, both for its construction and for combustion.

The name Rocket Stove derives from the fact that the combustion and the horizontal fumes expulsion are possible thanks to the rocket effects: the temperature difference guaranteed by the isolation of the chimney and the second combustion of the fumes produced by the burning wood, in fact create an air draw, increasing the stove efficiency.

The most relevant benefits that have generated the great success of the Rocket Stove are:

- it is easy to build, even with commonly available recycled materials;
- it uses from 40 to 90% less wood fuel than a traditional stove, producing the same heat output ;
- it uses small diameter wood fuel and can therefore be fuelled with branches and products from the underbrush, instead of larger brushwood obtained by chopping down trees ;
- it is less polluting : it only emits CO<sub>2</sub> and water vapour instead of dense smoke as a traditional stove; the temperature is much lower and heat is not dispersed as hot flue gases ;
- it can burn for a long time without adding fuel continuously.

The Rocket Stove can be built in two basic shapes, with similar operation principles. The "L" shaped stove is mainly used as a kitchen. This type is easier to build and requires less material, but it requires more care in fuel supply. A simple Rocket Stove for cooking can be built very easily, by following instructions on online manuals.



