

Two-Pot Rocket Lorena



Type

Built-in household rocket mud stove with two saucepan cavities (pot-holes) and a chimney.

Names

Rocket Lorena (Uganda)

Rocket Mud Stove (Kenya)

Fuel

Fuelwood

Country of Origin / Dissemination Area

Uganda, launched November 2004. About 250,000 stoves disseminated by October 2008.

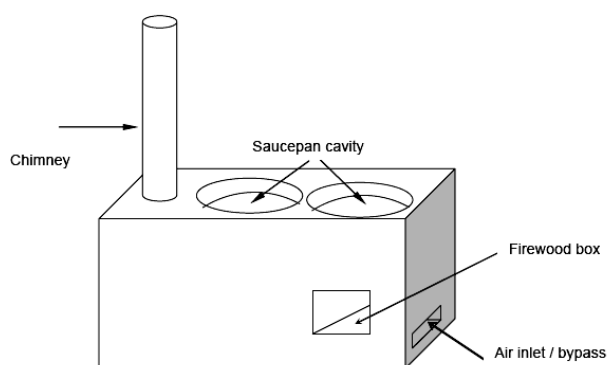
Kenya, launched May 2006. Up to October 2008 a total of 15,000 two-pot rocket stoves have been built.

Users: Rural, peri-urban households

Price:

In Uganda, the average price is 3-4.5 US\$ depending on region, size and negotiating ability (2008).

In Kenya, the average price is 5 -10 US\$ (2008).



Structure of the Rocket Lorena two-pot stove

General description

Fixed, built-in massive mud stove with

- Two pot cavities and a chimney
- Single fuel feed and combustion chamber.

Built on rocket-stove principles, the version shown has a shelf for inserting firewood at the correct level. The latest version has a separate air inlet instead of this shelf. The stove has a tall combustion chamber, a well-defined airflow, and the pots are set into the body of the stove. Pot cavities are customised for specific pot diameters.

The stove has a rectangular cross section, with the overall size dependent on the pot diameter.

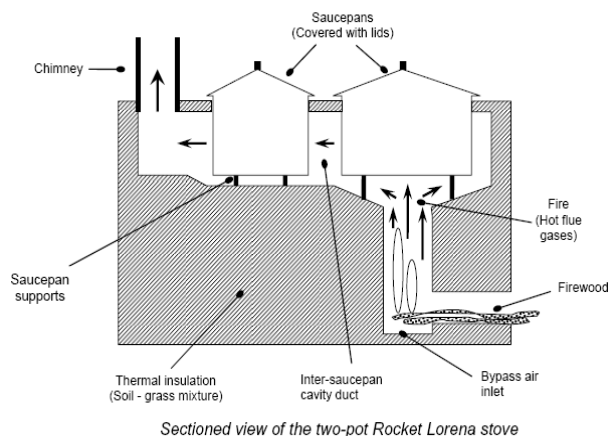
Stove dimensions

For a stove of average size:

- Length 110 cm
- Width 60 cm
- Height 40 cm
- Chimney height 1m

The chimney height may be adjusted, depending on the type of kitchen.

Lifespan: Average 2 years



Sectioned view of the two-pot Rocket Lorena stove

Materials used

Built of an insulating clay mixture consisting of organic material, (chopped grass, sawdust or chopped dry banana leaves) bound together with mud. The stove is either built as a homogenous block, or built of stones and bricks plastered with this insulating clay mixture.

Efficiency

Saves 50%–60% of the firewood used by a well-tended three-stone fire if both pot-holes are used properly.

There is high potential to alleviate indoor air pollution through improved combustion, if the chimney is properly maintained.

Production / Supply

Produced by local artisans that are trained and supervised by local, more senior, colleagues.

The stove builders live in the villages and are directly contracted and paid by the users

No sophisticated tools are necessary, but a binding clay soil is needed.

A quick and simple guide is available, providing suitable dimensions for the stove (see last paragraph).

One stove builder can produce on average 300 stoves / year.



Strengths and weaknesses

Positive

- + Efficient, cheap stove with great potential to reduce indoor air pollution.
- + Rapid level of adoption by large numbers of people
- + Income generation in the villages through use of locally available materials and the employment of local stove builders.

Negative

- Only applicable where the appropriate clay soil and organic material is available.
- Considerable wear and tear, especially in the fire chamber, and around the pot-rests and pot-holes due to energetic stirring required in making *ugali* (maize porridge).
- Regular maintenance needed.
- Also users need certain know-how to use the stove properly and to carry out a proper maintenance.
- The dissemination system, involving trained local stove builders, needs a quality monitoring system maintained over several years.

Available documents:

- Ministry of Energy and Mineral Development (Uganda), Energy Advisory project: Construction Manual for Household Rocket Stoves, June 2008.
<http://www.energyandminerals.go.ug/D/OCS/>

Source of pictures:

Energy Advisory Project, GTZ Uganda



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