

Wisdom Stove (Malaika Jiko, MJ/M2)



Why to choose this solution?

The MJ and M2 cookstove models are TLUD (Top Lift Upward Draft) gasifier biomass cookstoves. Using a few small sticks of firewood, the stove burns the wood, converting the smoke into a synthetic gas, which burns with minimal emission and a clean flame, allowing efficient cooking. As the wood burns, it is converted to charcoal through a thermal process called pyrolysis. The user thus produces charcoal while cooking with firewood. The charcoal continues to burn in the stove, which provides heat for extended cooking or can be saved for future use.

Savings per day or production:

According to the manufacturer, this cookstove saves up to 75% of fuel and also creates significant cost savings (1 sack of charcoal in KSh = cost of one MJ).

Cost in money and in own time to construct:

The Wisdom TLUD gasifier stove retails at KSh 3,500.00 (USD 35) and is exempt from Value Added Tax (VAT), a ruling made by the government of Kenya in June 2016.

Lifetime:

5 Years.

Maintenance needed:

The ceramic chamber can be replaced.

Resources needed in use:

The stove burns sticks of firewood (ideal wood is dry and broken into matchbox-sized pieces), maize comb, crostems, coffee husks, or dried biomass briquettes.

Problems and limits:

Wisdom also links up with Micro Finance Institutions (MFIs) to get access to more consumers, but unfortunately the MFI would not let Wisdom contact these customers directly to gauge end-user feedback, and this resulted in poor after-sales support. Wisdom teamed up with a Savings And Credit Cooperative Society (SACCO); however, this relationship also ended when it was found that the SACCO was not carrying out a key component of sales (stove demonstrations), which resulted in lack of understanding by end-users on how to use the stove correctly.

Where and how can you get it or make it?

The stoves are manufactured and distributed by Wisdom Innovations. The manufacturing facility is based in North Kinangop (Nyandarua County) in Kenya and expansion plans are currently on-going in Zimbabwe. The company has sold stoves all over the country, but decided to focus on four specific counties - Nakuru, Nyandarua, Narok, and Kiambu - in line with their current production capacity. It is possible to contact local technicians through customer care (contacts below).

Skills needed to produce, install, maintenance, use:

Production and maintenance require engineering skills and training in metal crafts. The user manual for Malaika Jiko stove is available in both English and Kiswahili. Instructions on how to use the MJ stove are available on the webpage of WisdomStoves.

How to use it:

<https://youtu.be/d7ZitRn4Nnw>

How to maintain it:

To be added.

Climate effect (if any):

The stove burns the wood, converting the smoke into a synthetic gas which burns with minimal emissions and a clean flame.

Where it is used and how many users are there?

Over 3,700 cookstoves have been sold across four counties in Southwest Kenya: Kiambu, Nyandarau, Narok, and Nakuru.

Why is it successful?

It burns with minimal emissions and clean flame, allowing efficient cooking. As the wood burns, it is converted to charcoal which continues to burn in the stove, and provides heat for extended cooking or can be saved for future use. Eliminates wait time for cooking, greatly reduces destruction of wood growth compared with current methods of charcoal production, and greatly reduces harmful smoke.

If you can make it, a short description, typical problems, materials needed:

The MJ is placed on top of a traditional improved Kenya jiko with a ceramic insert. Make sure the fit is snug and secure. Doors on the two stoves should be aligned and open. The M2 works independently, as the design includes a ceramic insert.

How to make it (if possible):

<https://youtu.be/QrSHJFNqAFI>

How is it delivered and by whom?

The company uses two business models; direct sales and low-cost credit. The stoves are distributed through microfinance institutions, SACCOs, dairy co-operatives/societies, and other organized groups. The stoves are delivered along with a training and follow-up session. Because the Wisdom Stove works quite differently from many other improved cookstoves available in the market, the company recognises the need for behavioural change by end-users, who are usually women. Most of their sales are done through referrals from satisfied end-users.

Successful financial model

Wisdom has established strong partnerships with many organisations, such as Kenya Forest Service and Kenya Climate Innovation Centre (KCIC). The SACCO provides, among other services, technical support, market platforms, networking opportunities, training, and mentorship, as well as an office space in Nairobi.

What policies and strategies helped the success?

Exempt from Value Added Tax (VAT), a ruling made by the government in June 2016 that has facilitated the growth of the innovative clean cookstoves (ICS) sector. Constant consumer awareness-raising and training is their priority, and they take pride in maintaining continuity with all their customers.

More info:

<https://wisdomstoves.org>

Sources:

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When was the case uploaded?

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