

# A safer world in clean hands

## Frequently Asked Questions

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# About the unit

## Where can I order Jengu?

To see all the Jengu manufacturers please go to the [“About Jengu”](#) section in our [website](#). We are always looking for companies and organisations interested in producing Jengu locally, to the quality standards that have been designed for.

If there is not yet a manufacturer or provider that can supply in your country, please contact us, and we will help you to find a local manufactory. Also, if you are interested in becoming a recommended manufacturer or provider, please don't hesitate in contacting us, and we will support you to become one.

## Can I use the design blueprint of Jengu to manufacture the handwashing unit locally?

Yes, Jengu is an open-source blueprint design; hence it can be locally manufactured by any interested company or individual without having to pay any royalties. If you are interested in producing Jengu, please contact us.

To make Jengu to the standards that it has been designed fabricators should have the capability to:

- bend, cut and weld steel tube;
- cut and fold sheet metal (a laser cutter is preferable); and
- have the capability to cut a thread to fit a large nut to the underside of the spout.

## Can Jengu be modified to satisfy local needs or local capabilities?

Yes, one of the main design criteria, when Jengu was designed, was that it could be locally manufactured. To achieve this, Jengu's design facilitates how it can be tweaked or modified to satisfy local necessities or capabilities. If you need support for updating Jengu's design or need support to do this, please don't hesitate in contacting us and we will try to support you.

# About the unit

Is Jengu available for children?

Yes, Jengu is available as a kid's version which has a lower height basin. This height can be modified to better suit the children targeted.

Is Jengu available for people with reduced mobility?

Yes, Jengu has a reduced mobility version which has a smaller height and the pump located near the basin so it can be used with the elbow. As reduced mobility can be very specific, this version can be adjusted to better adapt to particular needs.

How durable is Jengu?

The Jengu blueprint has been designed to be long-lasting, and that is why it is made from welded and pop-riveted stainless-steel sheet and/or galvanised steel tube, so it is robust and durable. The specific lifetime of the materials can be checked with particular manufacturers.

Where has Jengu been used?

Currently, Jengu has been tested with very positive results in refugee settlements in Uganda, as well as in different missions with the British Army and the local offices of Arup and the British Red Cross.

The London School of Hygiene and Tropical Medicine is currently planning a more substantial controlled test in Kenya.

We are also keen on gathering evidence from all the places where Jengu is being used, so if you are interested in using Jengu, please don't hesitate in contacting us so we can receive your feedback.

# Operations and maintenance

## Which water containers can be linked to Jengu?

Jengu's supply water is fed through a foot pump from a water container. A variety of water containers can be used including Jerry Cans or larger capacity water tanks. If required, more than one unit can be connected to the same container, which makes it very flexible. Because Jengu supplies water through a user-friendly foot pump, the water container is placed on the ground and doesn't need to be gravity fed.

The recommended volume size of the water storage will depend on the estimated number of uses per day and how often the water source can be refilled.

## What is Jengu's water consumption?

It is estimated between 250 to 350ml of water per use. This means the following estimated number of uses per water storage tank:

- Jerry Can (20l): 60-80 uses
- 500l tank: 1,500 – 2,000 uses
- 1,000l tank: 3,000 – 4,000 uses

## Which type of soap can I use with Jengu?

Jengu has been designed so both liquid and bar soap can be used. Liquid soap is the preferred option as it is likely to make handwashing more desirable and reduces the risk of spreading disease. Also, liquid soap is easy to produce and buy locally.

Two liquid soap options are provided to reduce the risk of theft:

- bottle dispenser with wire cable; and
- pump dispenser.

In the case of liquid soap not being available, bar soap can be drilled and secured with a wire cable, so soap is always available.

Metal cable and clamps are provided to secure either a bottle dispenser or a bar soap.

# Operations and maintenance

## How do I dispose of the wastewater from the unit?

It is essential to responsibly dispose of the wastewater from Jengu so it doesn't create any ponding around the unit that could lead to the transmission of vector disease.

A drain in the basin takes wastewater to a hose so it can be connected into the nearest gully, a soak pit or a water container that can be later safely emptied or treated as greywater and reused. Jengu is provided with a flexible waste-water hose pipe.

The assembly instruction provides guidance on how to create a soakaway and dispose of the wastewater.

## How do I assemble the unit?

The unit is easy to assemble by two people in about an hour. Jengu's metal parts are pop-riveted together. All the different elements and tools including the rivet gun, rivets and metal wires come with the unit.

Assembly instructions are available and should be supplied with the unit. Alternatively, they can be downloaded from [this link](#) (to be added). There is also an assembly video available on YouTube.

For any further question, please don't hesitate in contacting us.

## What elements and tools will I need to assemble the unit and install it in the field?

All the unit components are provided except for the water containers. This includes pump and hoses pre-fitted, fixings, jubilee clips, basin and drain, soap security clamps and cables, a mirror and a coloured soap tray. Water containers can be sourced locally depending on the required size.

To assemble the unit, you will only need the following tools that can be supplied with the unit:

- 1x pop rivet gun to fix together the unit components
- 1x screwdriver to tighten the jubilee clips that fix the hoses
- 1x 2mm Allen key to remove and replace the soap

# Operations and maintenance

What are the operation and maintenance tasks required?

Three main activities are suggested to be carried out regularly to ensure the appropriate use of Jengu:

1. Water and soap refill: Jengu must always have access to water and soap so it can be used.
  - Water: We recommend using a water container that is large enough to provide water for all the handwashing expected in one day (or at least half-day, if you can refill it twice per day). You can calculate the number of uses per water tank based on the water consumption estimations described above (250-350ml/use approx.). In case of smaller water containers being preferred (i.e. Jerry Cans), please make sure to have a reliable water refill strategy.
  - Soap Refill: As stated in the soap related question above, liquid soap is always the preferred option both of the users' preferability as well as because it reduces the risk of spreading the disease. It is vital to make sure that soap is always available. Liquid soap containers can be easily refilled at the same time as the water. It is estimated around 5ml of soap per use, giving circa 200 uses per litre.
2. Regular cleaning of the unit: To ensure Jengu is an attractive place to wash hands, it should be thoroughly cleaned regularly (At least once a day, if very frequent use). The basin, the frame and the mirror can be cleaned with any type of non-abrasive liquid multi-purpose surface cleaner or directly with water and soap. The footplate and pump should be regularly swept and washed with soap and water.
3. Drainage / soak pit performance check: To avoid any potential vector disease, the wastewater must be adequately drained. A variety of options for the drainage are suggested in the assembly instructions. It is essential to check regularly that there are no drainage issues around the unit and that it has no leakages.

# Operations and maintenance

## What happens if the foot pump breaks?

The correct performance of the foot pump is vital for Jengu's usability. The recommended foot pump is called "Babyfoot Pump", it is manufactured by Whale Pumps in the UK, but it can be easily bought online in many places. In case of not being able to get it, you may be able to use similar foot pumps that are locally available.

The Whale "Babyfoot Pump" has a five years warranty; however, in case of breakages, the pump has simple instructions for servicing the pump and replacing any damaged part. You can download this both on our website or in the Babyfoot pump website, where they also have further information about it.

We recommend having spare foot pumps so they can be easily replaced while the broken one is repaired. Spare parts can be ordered from the manufacturer or online.

## Which spare parts do you recommend?

Jengu has been designed to be robust, so the need for repairs is minimised. However, things always happen, and there can still be things that need to be adjusted or repair. We recommend having the following spare parts and tools:

- One spare foot pump plus one additional for every ten units managed. (i.e.: 1-10 units: 1 spare pump, 10-20 units: 2 spare pumps, etc)
- A pop rivet gun and rivets
- A screwdriver
- A 2mm Allen key
- Metal cable and clamps



# Partnerships and donations

What do I do if I want to partner with you or donate to this cause?

If you are looking to purchase Jengu, want to manufacture it, or would like to contribute to the solidarity fund for the continuous use and development of Jengu, please don't hesitate in contacting us through our "Get Involved" page in our website.

What kind of partnerships are you considering?

We are open to considering any type of collaboration and partnership; however, the most common ways to collaborate with the Jengu team are:

- donors and partners that are keen on funding the distribution and installation of Jengu in some of the most vulnerable parts of the world;
- manufacturers that are keen on producing Jengu and becoming certified manufacturers
- donors that are keen on funding the continuous development of Jengu or other WASH-related challenges.

Purchasing or investing in Jengu will focus on directly reducing the transmission of COVID-19 and gastrointestinal illness as well as raising public awareness of the importance of handwashing with soap and water.

The Jengu team can support with:

- Supply chain logistics, including local sourcing manufacturers, adapting the design to local capabilities if necessary and distribution.
- Remote support for installation, and operation & maintenance.
- Demonstrating impact through assessment and feedback that will also support the continuous development of Jengu's design.

## Contact us

If you have any further question please send us an email to [info@jengu.org.uk](mailto:info@jengu.org.uk) or visit [jengu.org.uk](http://jengu.org.uk) for more information.