

FILTER suitable for a pump

 Low-tech with Refugees - Low-tech & Réfugiés




https://wiki.lowtechlab.org/wiki/FILTRE_adapt%C3%A9_%C3%A0_une_pompe/en

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 Difficulté **Moyen**

 Durée **3 heure(s)**

 Coût **150 EUR (€)**

Description

Biodegradable filter assembly that retains the contaminants present in the water as it passes through.

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Introduction

For a long time, the problem with filters was that they took too long to filter. Numerous solutions have been proposed over the years to improve their cost-effectiveness, while bearing in mind that their composition will have to use easily accessible materials. The biosand filter was an innovation that solved this problem thanks to its simple installation and it is for domestic use. It works in several stages, which can be summarised as follows Water is poured into the top of the filter, where a diffuser plate placed above the sand disperses the force of the water. By gravity, the water then slowly passes through the layer of sand, then gravel, before reaching the pipe at the base of the filter. At this point, the water is pushed through the pipe embedded in the concrete cover and exits the filter, ready for use.

As with all slow sand filters, there is a combination of biological and mechanical action to remove pathogens from the water. When the water is poured over the top, its organic components remain on the surface of the fine sand and form (after one to three weeks) a bacterial film.



Matériaux

Gravel
Sand
Concrete
Pipe
Pump
Cover
Water

Outils

Glove
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.
Saw

Étape 1 - Casting the shell

Pouring concrete into the formwork system

Étape 2 - Washing of gravel - sand

Étape 3 - PVC pipe assembly

Étape 4 - Installing the pump in the PVC pipe

Étape 5 - Installation of gravel and sand elements

Étape 6 -
