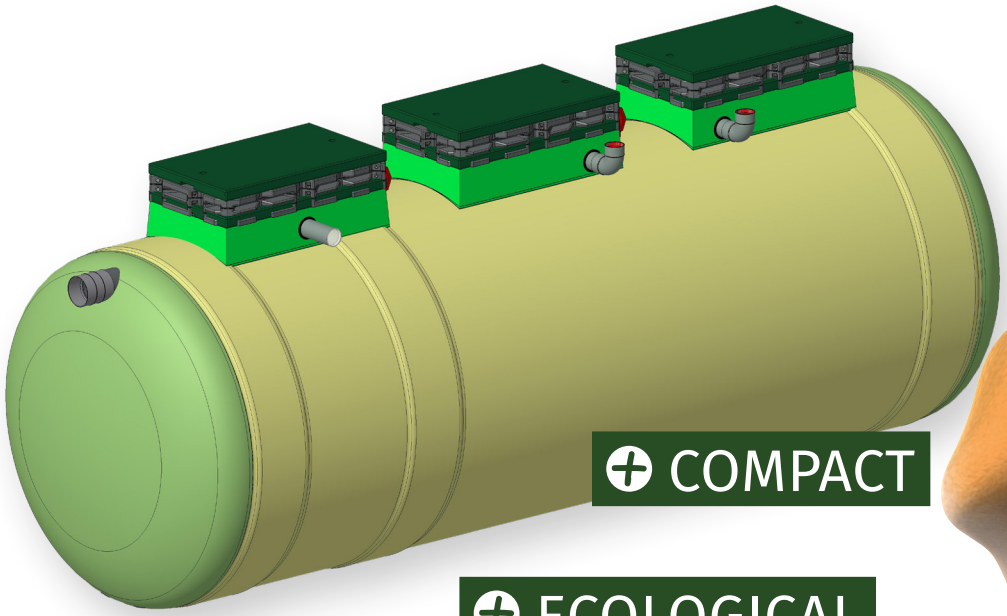
SIMOP
EQUIPEMENTS POUR L'ENVIRONNEMENT

WASTEWATER TREATMENT

Bionut® Max

READY-TO-INSTALL COMPACT FILTER BASED ON RECYCLED AND COMPOSTABLE HAZELNUT SHELLS FROM 21 TO 200 EH

SYSTEM PATENTED SYSTEM



+ COMPACT

+ ECOLOGICAL

+ ECONOMIC

100% COMPOSTABLE

CE

WWW.SIMOP.FR

MAIN APPLICATIONS

The filters of the **BIONUT® MAX** range are designed for the **wastewater treatment** in the context of grouped non-collective sanitation or small collective sanitation from 21 to 200 population equivalents. **These devices support intermittent operation and do not require any energy input.**

Designed and manufactured in France, BIONUT® MAX is an ecological **is an ecological product using a natural filtering media, recycled and recyclable at the end of its life: the hazelnut shell.**

The BIONUT® MAX range is suitable for all types of sites, from camping sites to collective housing or small food processing industries.

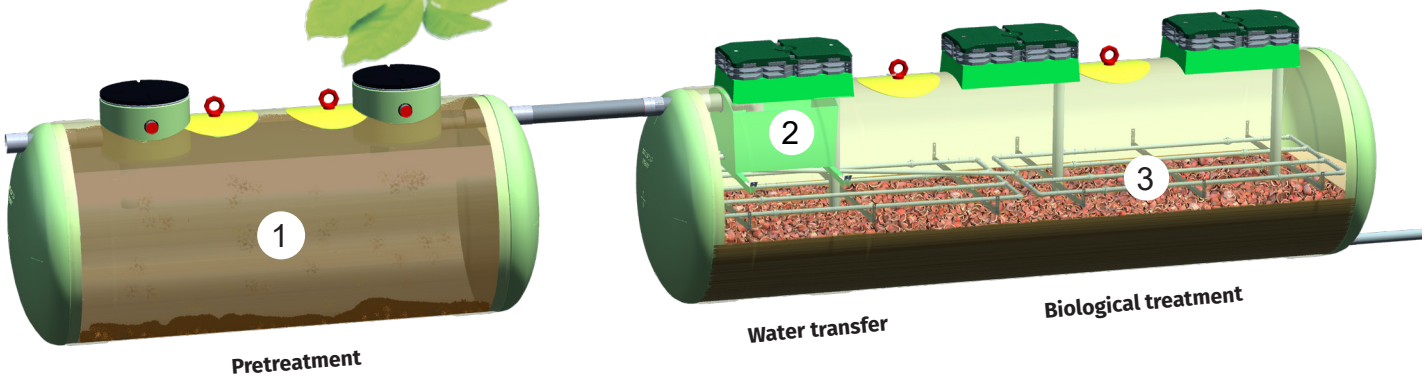
THE + USERS

- No energy input.
- Insensitive to corrosion due to $_{H2S}$.
- Adapted to load variations.
- Compostable media at end of life.
- No work during the renewal of the media.
- New trough flush with flexible bellows (integrated in the filter).
- Optimized distribution of the effluent on the media thanks to the integrated trough flush.
- Compliance with the performance requirements of the modified 21/07/2015 order.
- Possibility of setting up a maintenance contract with our partner.
- Reduced maintenance costs (1 visit every 2
- years).
  Easy maintenance thanks to the pre-filters at the outlet of the tank.

THE + INSTALLERS

- Up to 50EH in a single compact filter.
- Laying in the water table up to the inlet water
- line.
- Single material media.
  Filter delivered with hazelnut shells (part in big bag so that the total weight does not exceed 4
- tons).
- Easy and quick maintenance.
  Possibility of setting up a maintenance contract with our partner.

> OPERATING PRINCIPLE



The treatment of BIONUT® MAX is based on the technique of the biological compact filter which reproduces the natural purification of water through the soil. These systems are composed of an all-water tank ensuring the pretreatment of the effluent and a compact filter based on hazelnut shells ensuring the biological treatment.

1 PRE-TREATMENT

The pre-treatment is carried out by the all-water tank, dimensioned on the basis of 3 days of residence time.

2 WATER TRANSFER

Once out of the septic tank, the pre-treated water arrives in the **flush** tank integrated in the filter.

This flush feeds the distribution manifold to**optimize water distribution** on the filter surface.

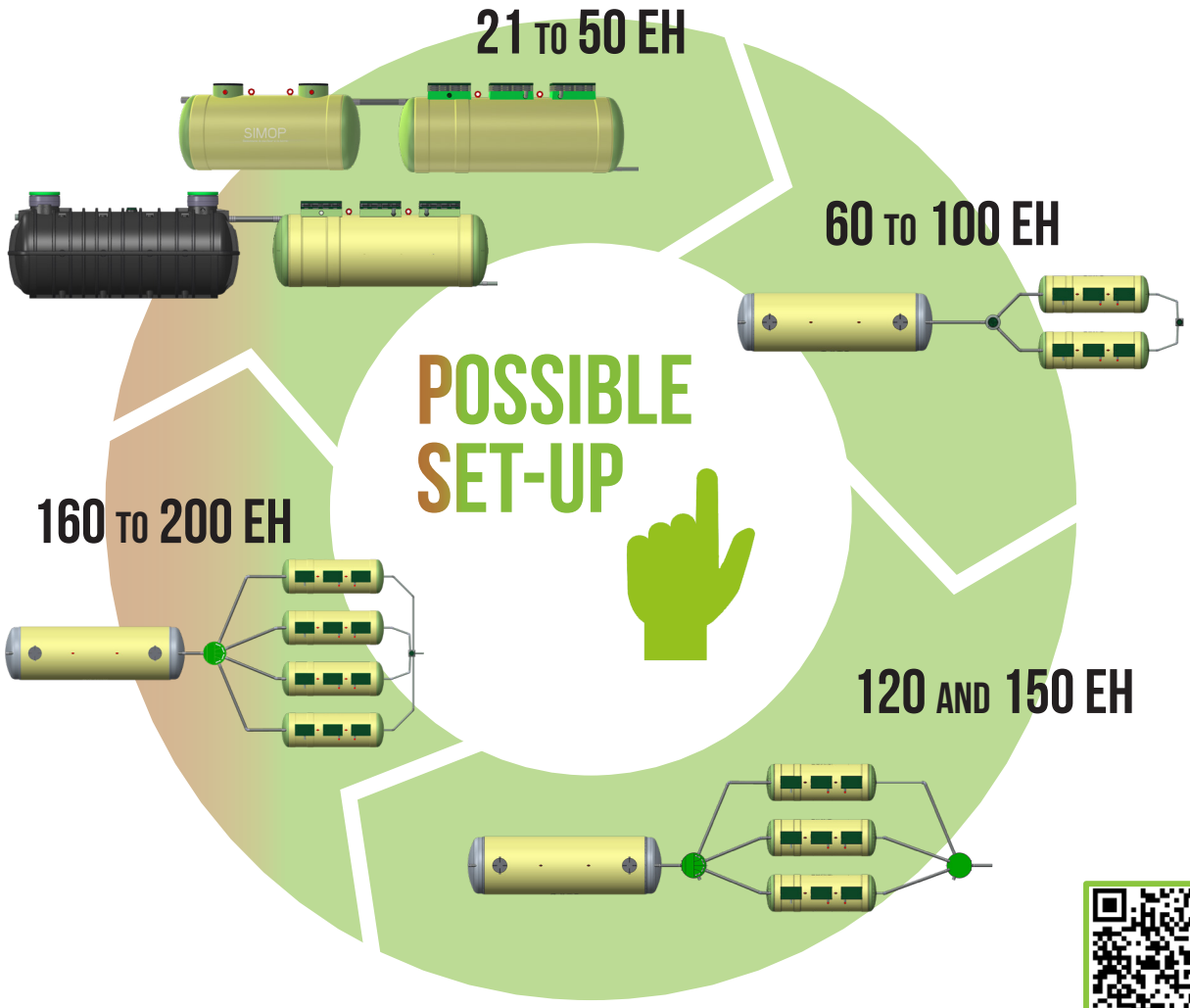
3 BIOLOGICAL TREATMENT

The biological treatment is carried out by the compact filter based on hazelnut shells.

At the outlet of the trough flush, the water then percolates through the **the water then flows through the filtering mass made up of hazelnut shells on which aerobic bacteria are fixed to ensure the treatment of the water.**

The oxygen supply necessary for the development of bacteria is provided by a 100 mm ventilation.

Bionut® Max



+ INFO

focus on hazelnut shell filtration

In partnership with the Ecole des Mines d'Alès, SIMOP has developed a bio-media support using hazelnut shells. But why hazelnut shells?

- 100% natural bio-media support .
- **No decomposition of** the media in the filter over time.
- **No sagging** of the media.
- Ecological valorisation of a waste from the food industry.
- Resource from the **french production** (very low carbon footprint).
- **Favorable to bacterial development.**
- **Compostable** at end of life.

A SUSTAINABLE AND ECONOMIC SECTOR

Because of its environmental approach, SIMOP has developed compost recipes that allow the recovery of Bionut® hazelnut shells at the end of their life.

A study was conducted in collaboration with the Communauté d'Agglomération du Grand Villeneuvois, the FNSEA, and the company UNICOQUE, which **certifies the compostability of hazelnut shells from Bionut®, in accordance with the NFU44-095 standard**.

Finally, it meets the law on the fight against waste and the circular economy (AGEC) of February 10, 2020, which provides for the establishment of an EPR (Extended Producer Responsibility) channel for construction waste from January 1, 2022.

This recycling of Bionut® hazelnut shells at the end of their life also **reduces the treatment costs when replacing the filter media**.

The **waste code** 19 08 99 mention "used hazelnut shells" has been**validated by the Ministry of Ecological Transition** and follows a proposal of the DREAL Nouvelle Aquitaine/UD47.

SIMOP

EQUIPEMENTS POUR L'ENVIRONNEMENT

Redonnons le meilleur à la terre

FIND ALL OUR PRODUCTS ON
WWW.SIMOP.FR

- WASTE WATER
- RUNOFF WATER
- STORM WATER
- ROADS AND NETWORKS
- SECURITY AND STOCKAGE

10 RUE RICHEDOUX
50480 SAINTE-MÈRE-EGLISE
FRANCE

simop@simop.fr

TEL : 02 33 95 88 00

FOLLOW US ON

DEPCOM09ENG- February 2023