

# BIONUT COMPACT FILTER 5 TO 15 POPULATION EQUIVALENTS

**Bionut®**

**6053**

## 1 Use

The BIONUT6053 range of wastewater treatment systems is designed to treat domestic wastewater from single-family homes or groups of dwellings.

These devices support intermittent operation secondary residences and do not require any additional energy.

Treatment is based on the compact biological filter technique, which reproduces the natural purification of water through the soil.

BIONUT consists of an all-water tank for effluent pre-treatment and a compact filter based on hazelnut shells for biological treatment.

## 2 Operation

Treatment with BIONUT is a two-stage process:

- pre-treatment, carried out by the all-water tank
- biological treatment, using a compact filter based on hazelnut shells.

Once it has left the all-water tank, the pre-treated water flows into the tank's integrated trough flush. This flush feeds the distribution ramp to optimize water distribution over the filter surface. The water then percolates through the filter media, made of hazelnut shells to which aerobic bacteria are attached for water treatment. The oxygen required for bacterial growth is supplied by a 100 mm ventilation system. The treated water is then discharged via a drain or into the surface water environment (subject to authorization).

## 3 Maintenance

- All-water tank: standard, routine maintenance. Empty the tank when the sludge level reaches 50% of the total volume, see corresponding pit data sheet.

- BIONUT filter: see user guide.

- annual: quick and easy, visual check of the installation and replacement of the trough exible if necessary.

- every 10 years: hazelnut shell replacement



## ADVANTAGES

### • An economic step:

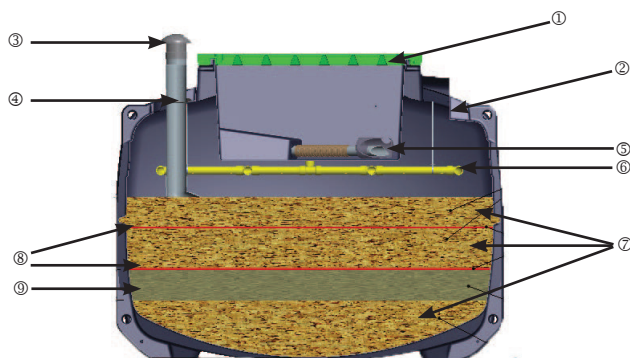
- small footprint
- Autonomous process, no power supply required
- eligible for eco-loans (éco-PTZ)
- low maintenance cost
- no work required on renewal filter media

### • An environmental system:

- 100% French product: innovation and design by SIMOP.
- Low carbon footprint
- No power consumption
- Excellent purification performance in compliance with current regulations

### • An ecological system:

- Natural material: shell-based gravel pack hazelnut
- renewable material
- recycled and recyclable material: ecological recovery of the shell, which was originally a waste product; the shell will be sent to a composting center at the end of its life.



1. sealing plug
2. polyethylene tank
3. air inlet
4. secondary ventilation
5. bucket flush
6. distribution ramp
7. hazelnut shells
8. geogrid
9. aeration media

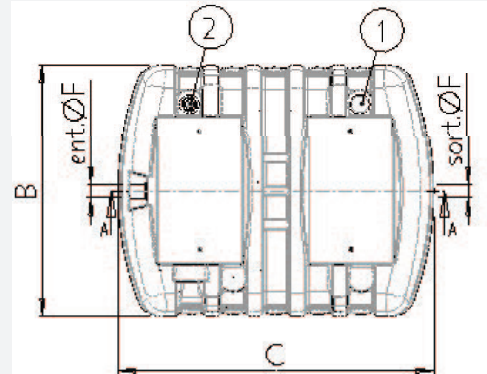
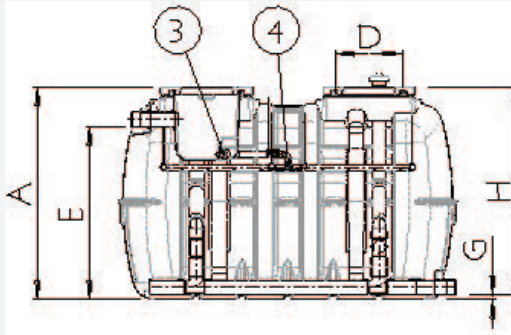
# BIONUT COMPACT FILTER **Bionut**<sup>®</sup>

## 5 TO 15 POPULATION EQUIVALENTS

**6053**

### FILTER DIMENSIONS :

1. air inlet (mushroom supplied)
2. secondary ventilation
3. integrated bucket flush
4. distribution system



| References      | A    | B    | C    | D       | E    | F   | G  | H    | Weight  |
|-----------------|------|------|------|---------|------|-----|----|------|---------|
| <b>BIONUT05</b> | 1500 | 1880 | 2059 | 470x920 | 1235 | 100 | 37 | 1463 | 850 kg  |
| <b>BIONUT06</b> | 1500 | 1880 | 2059 | 470x920 | 1235 | 100 | 37 | 1463 | 1035 kg |

### OPTIONS :

- RH2/2025/B-1: adjustable extension from 200 to 250 mm (1 piece)
- RH2/2025/B-2: adjustable extension from 200 to 250 mm (2 pcs.)
- REC2/02/13: polyethylene collection manhole, height 1300 mm
- RH2/30/B-1: 300 mm non-adjustable extension (1 piece)
- RH2/3030/B-2: non-adjustable 300 mm extension (2 pcs.)

### COMPOSITION AND CHOICE OF UNIT

#### LOW OUTLET SPINNERET



| PE capacity                   | 5             | 6             | 10            | 12            | 15            |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|
| Ref. of low outlet unit →     | BIONUT6053/05 | BIONUT6053/06 | BIONUT6053/10 | BIONUT6053/12 | BIONUT6053/15 |
| Composition ↓                 |               |               |               |               |               |
| ALL-WATER TANK (AWT) ↓        | INR03000      | INR03000      | INR05000      | INR06000      | INR08000      |
| Volume m <sup>3</sup>         | 3             | 3             | 5             | 6             | 8             |
| Data sheet No.                | 6008          | 6008          | 6008          | 6009          | 6009          |
| Filter                        | BIONUT05      | BIONUT06      | BIONUT05      | BIONUT06      | BIONUT05      |
| Number of filters             | 1             | 1             | 2             | 2             | 3             |
| Power supply box              |               |               | REP2/04/04    | REP2/04/04    | REP2/04/04    |
| Quantity required             |               |               | 1             | 1             | 1             |
| Data sheet No.                |               |               | 6060          | 6060          | 6060          |
| Feed trough                   |               |               |               |               | AF2/6016/055  |
| Quantity required             |               |               |               |               | 1             |
| Data sheet No.                |               |               |               |               | 6016          |
| Floor space in m <sup>2</sup> | 7             | 8             | 12.5          | 14            | 18            |

# BIONUT COMPACT FILTER **Bionut**<sup>®</sup> 5 TO 15 POPULATION EQUIVALENTS

**6053**

## HIGH OUTLET UNIT



| PE capacity                      | 5               | 6               | 10              | 12              | 15              |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Ref pack high outlet Composition | BIONUT6053/05SH | BIONUT6053/06SH | BIONUT6053/10SH | BIONUT6053/12SH | BIONUT6053/15SH |
| Unit                             | BIONUT6053/05   | BIONUT6053/06   | BIONUT6053/10   | BIONUT6053/12   | BIONUT6053/15   |
| Lifting                          | RELBIONUT       | RELBIONUT       | RELBIONUT       | RELBIONUT       | RELBIONUT       |
| Data sheet No.                   | 5170            | 5170            | 5170            | 5170            | 5170            |
| Floor space in m <sup>2</sup>    | 15              | 16              | 38              | 45              | 49              |

## 4 Performance

BIONUT has obtained ministerial approval 2015-005, and complies with the following regulatory requirements:

| Parameters       | Regulatory thresholds of the modified September 7, 2009 order |
|------------------|---|
| BOD <sub>5</sub> | 35 mg/l   |
| TSS              | 30 mg/l   |

This performance is achieved under normal conditions of use, maintenance and servicing, in accordance with the relevant regulations of this user guide and after a 1-month start-up period.

## 5 Installation and commissioning

• **Installation** : refer to P075 installation instructions and user guide. Caution: Maximum backfill height on the system is 60 cm.

If the backfill height exceeds 60 cm, it is necessary to :

- create a load-bearing slab resting on undisturbed soil
- raising the level of the ground with concrete supports

• **Commissioning**:

Commissioning is an important operation to validate the correct operation of the system.

It can be carried out by the user and/or a qualified professional. It must be carried out in accordance with the recommendations described in the user guide, and is the subject of a commissioning report to be returned to SIMOP.

## 6 Guarantee

SIMOP guarantees that the devices in the BIONUT range can treat domestic wastewater in accordance with the following requirements regulations.

This performance is guaranteed under normal conditions of use, care and maintenance, in accordance with the relevant regulations user's guide.

The tanks are guaranteed for 10 years, provided the installation conditions have been respected. The warranty period begins on the day of installation.