

# BIOROCK® Sewage Treatment



Non-Electric



Low running costs



Completely silent



Odourless



Small footprint



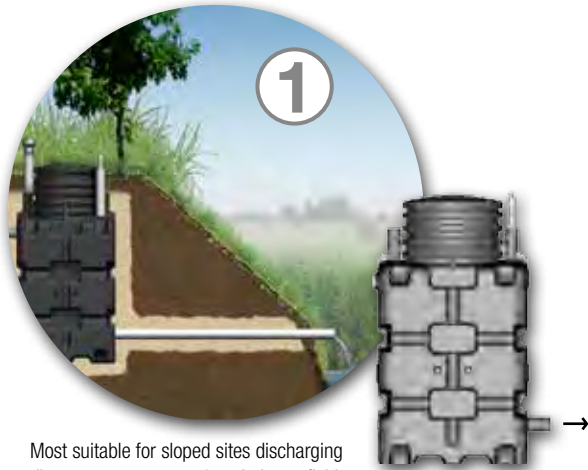
**BIOROCK**  
sewage water treatment

# BIOROCK®



## Non-Electric Sewage Treatment Plants for domestic waste water

BIOROCK was established in 1988 and is now an internationally acclaimed and experienced company and industry leading in compact wastewater treatment technology. BIOROCK systems have already been installed worldwide in the past 25 years. Our proven performance leads to trust of both the users of our technology and our supplier's network, which is the basis of our success.



Most suitable for sloped sites discharging direct to a watercourse\* or drainage field.

## The BIOROCK® Non-Electric treatment process

Initially the raw sewage (A) enters a primary tank (PT, B) to provide separation and the breakdown of organic solids (Primary Treatment). The sewage then passes through an effluent filter before discharging into the BIOROCK® unit which incorporates the well proven aerobic digestion process (Secondary Treatment) and filtration process (Tertiary Treatment).

BIOROCK uses a material with huge surface area which allows colonization of the necessary bacteria, a process which is essential for the effective treatment of domestic wastewater.

The BIOROCK media is highly resistant to degradation and remains extremely stable over the long term - our 25 years' experience in the industry being proof of this.

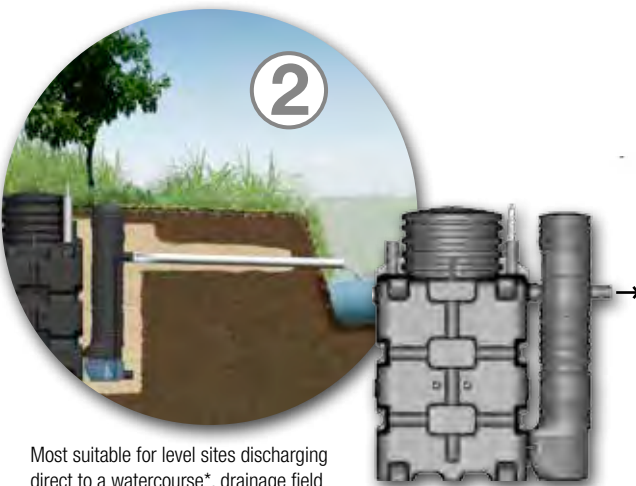
- Very Stable Inorganic material - does not break down over time, unlike "organic" media
- Requires little maintenance – scraping and scarification is not necessary, unlike for organic media
- The Structure and Composition ensures unsurpassed and unique surface treatment with exceptional purification results
- Ecological material, locally produced and recyclable

**BIOROCK offers a much more efficient and ecological wastewater treatment technique compared to traditional techniques that are very high in maintenance and energy consumption.**

### BIOROCK offers 2 discharge options :

1. BIOROCK gravity discharge
2. BIOROCK high-level discharge

Our high level discharge system is equipped with a reliable, high-quality pump kit. This kit is delivered "pre-assembled" for ease and speed of installation.

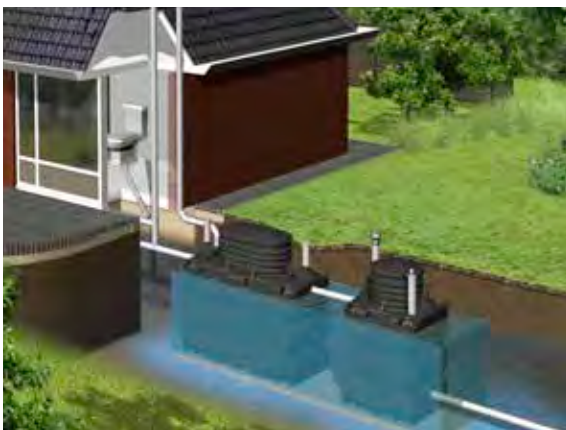


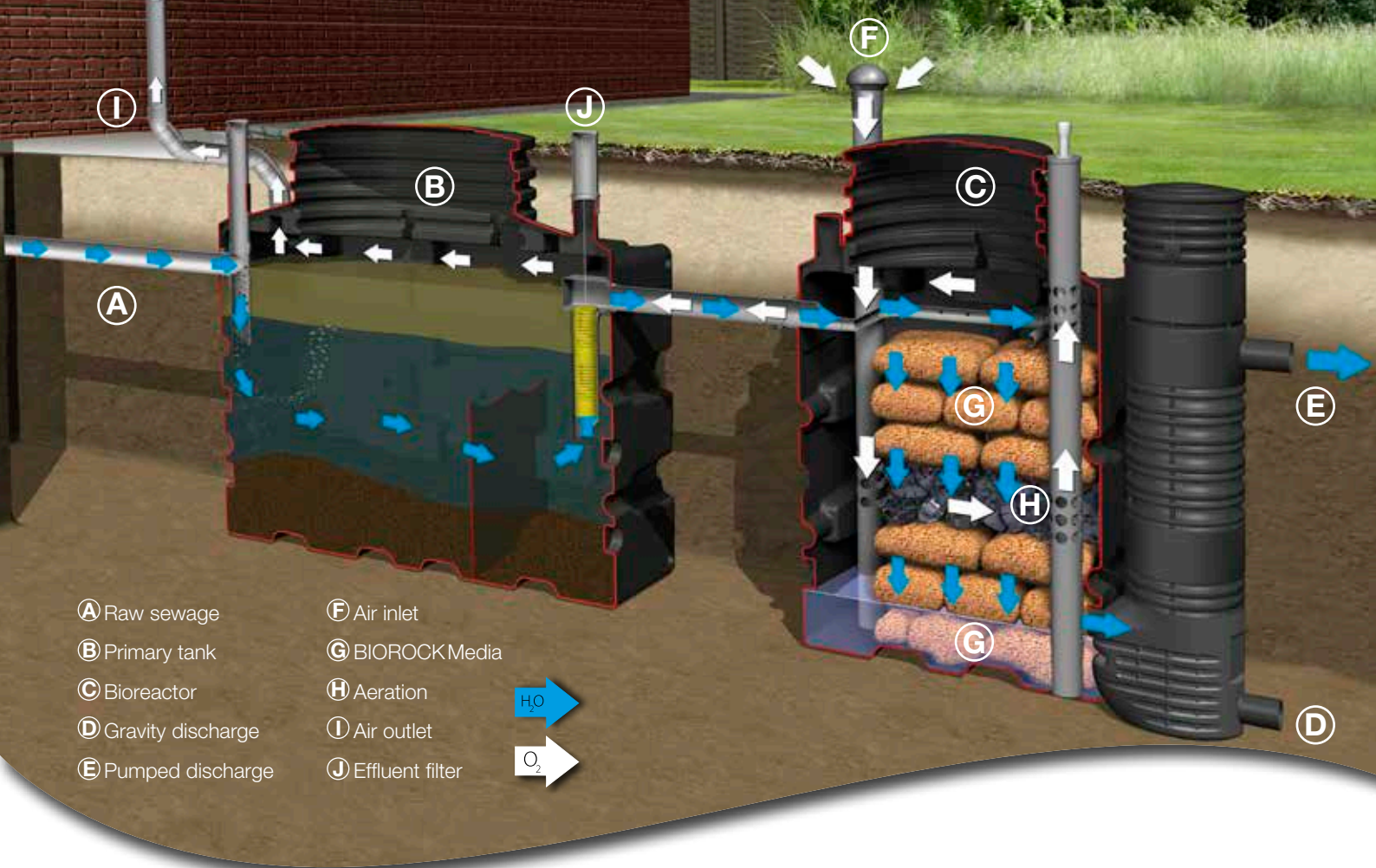
Most suitable for level sites discharging direct to a watercourse\*, drainage field or raised bed.

\*subject to local or national regulations.

## Installation for all type of ground conditions and applications.

- High ground-water sites.
- Reinforced and durable, the BIOROCK units and Primary tanks are reinforced as standard enabling them to be structurally sound in all ground conditions.
- The BIOROCK System has the ability to handle intermittent (seasonal) wastewater loadings, even during long absence periods
- Holiday Homes, Campsites, Caravan Parks, etc.
- The system can also handle low utilization levels without compromising the treated effluent quality.





## Unique advantages

BIOROCK provides a revolutionary, efficient and reliable compact wastewater treatment solution. Very compact, our systems are free from any blower or air diffusers. They don't need any electricity for the treatment process, leading to minimal maintenance and repair costs, the lowest operational costs and the longest desludge intervals.

These unique advantages lead to significant costs savings for the user compared to conventional wastewater treatment plants, as the reliability of the system is maximized with no possible breakdowns thus no need for expensive spare parts. The superb purification results produced by BIOROCK have placed our systems in a leading position when compared with older & traditional wastewater treatment techniques.

The BIOROCK® systems are delivered 'complete' and pre-assembled for ease of installation.

### Revolutionary technology

- ✓ Septic tank replacement / upgrade
- ✓ Non-Electric sewage treatment process
- ✓ 24 Hour start-up period
- ✓ Long absence periods acceptable

### Unique advantages

- ✓ Completely silent
- ✓ Low operational costs
- ✓ Very light maintenance
- ✓ Long desludge interval

### Sustainability

- ✓ Superb effluent quality
- ✓ Low carbon footprint
- ✓ Ecological material, locally produced and recyclable

### FACTS

#### TRADITIONAL VERSUS BIOROCK

Non-Electric purification process

Traditional units

BIOROCK

Silent & Odourless

Handles Intermittent Loading

Handles absence periods

Handles most household cleaners

Handles power failure

Septic tank conversion unit\*

Intensive maintenance

High sludge production

High operational costs

NO

NO

NO

NO

NO

NO

NO

YES

YES

YES

YES

YES

YES

YES

YES

YES

YES

NO

NO

NO

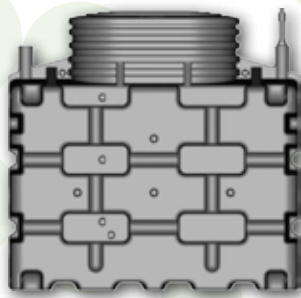
# The BIOROCK® range of sewage treatment plants



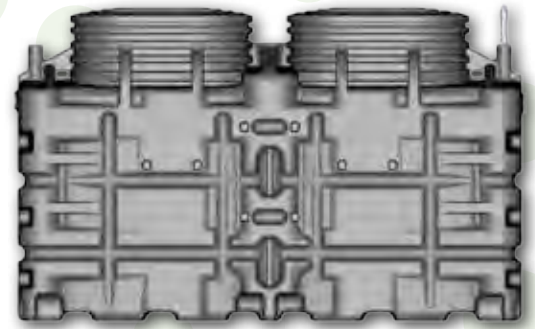
ECOROCK-1500



ECOROCK-2000



ECOROCK-3000



ECOROCK-5000

	ECOROCK-1500	ECOROCK-2000	ECOROCK-3000	ECOROCK-5000
Capacity in P.E.	4/6 p.e.*	10 p.e.*	15 p.e.*	30 p.e.*
Capacity in litres/day	600/900	1500	2250	3750
Material	HDPE	HDPE	HDPE	HDPE
Length	1150 mm	1450 mm	2150 mm	3550 mm
Width	1150 mm	1150 mm	1150 mm	1150 mm
Height unit (max.)	2100 mm	2100 mm	2100 mm	2175 mm
Weight (empty)	186 kg	223 kg	297 kg	625 kg
Δ in- & outlet pipe	1098 mm	1098 mm	1098 mm	1213 mm

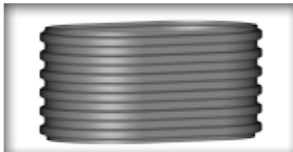
## Purification results BIOROCK®

Tested conform EU Norm EN 12566-3 + A2		
BOD <sub>5</sub>	4 mg/l	99%
COD <sub>5</sub>	26 mg/l	96%
S.S.	3 mg/l	99%

More results are available upon request

\*The capacity of the individual ECOROCK-5000 unit can be increased if the required effluent quality is of a lower standard than the results, achieved during the EN-12566-3 Performance test. "

## Options BIOROCK



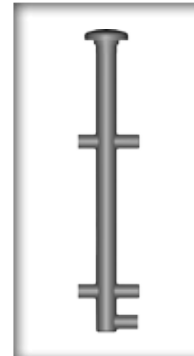
Extension set ø 700 x 1200 mm



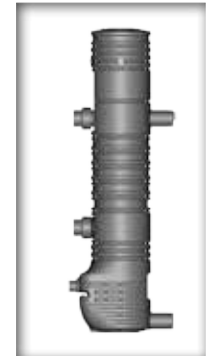
Extension set ø 400 mm



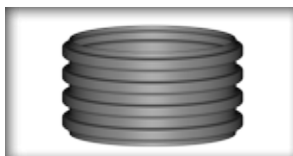
Mechanical fan ø 110 mm



Sampling pipe ø 160 mm



Pumping well ø 400 mm



Extension set ø 700 mm



Effluent filter for primary tank



Clips for above ground installations

## Our support

- A brand with strong values
- Access to licensed products
- Daily support by our team of professionals
- Excellent hands-on trainings
- Warranty: 25 years on tanks / 10 years on BIOROCK media\*

\*subject to conditions, contact us for details

[www.biorock.co.uk](http://www.biorock.co.uk)

email: [info@biorock.co.uk](mailto:info@biorock.co.uk)

Sales Enquiries: 01612466065

### BIOROCK Sewage Treatment Ltd.

UK North Office : 5300 Lakeside, Cheadle Royal Business Park, Cheadle, Cheshire SK8 3G

UK South Office: Unit A2, Lympe Distribution Park, Otterpool Lane, Hythe, Kent CT21 4LR



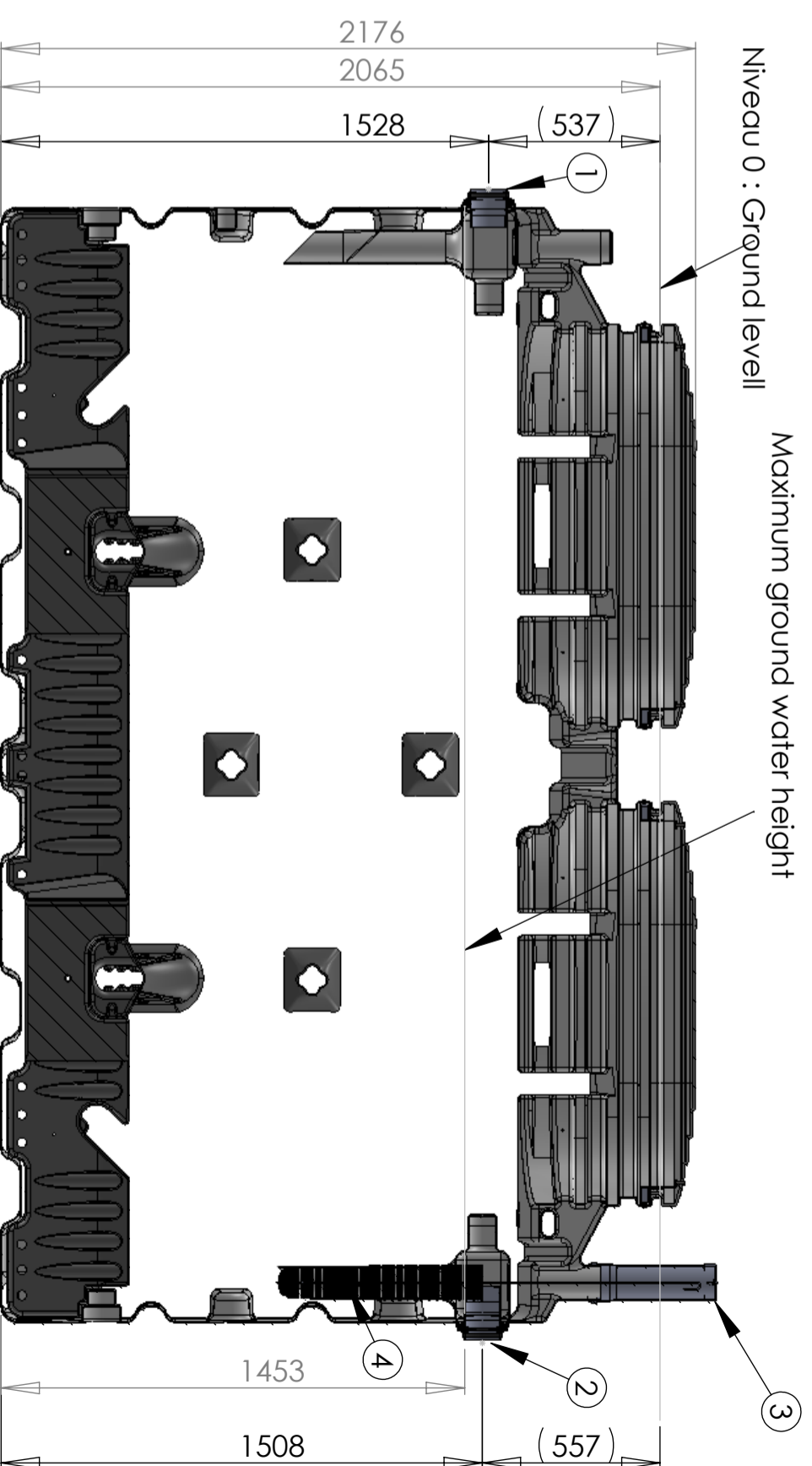
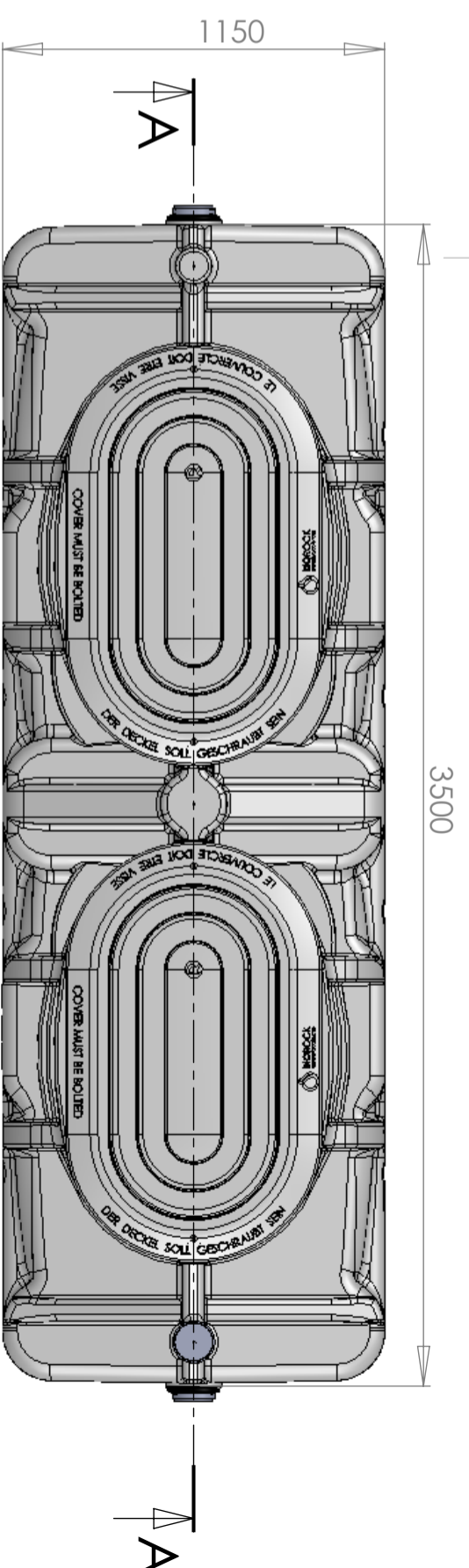
**BIOROCK**  
sewage water treatment



# BIOROCK® Primary Tank

## Volume 5000 Liters

1	Raw sewage water inlet & Air outlet
2	Water outlet & Air inlet
3	Removable cover, access to Effluent Filter
4	Effluent Filter



General Tolerance 3%

COUPE A-A  
Scale 1 : 20

Specifications	Value	Unit
Volume	5000	Litres
Length	3500	mm
Width	1150	mm
Height	2175	mm
Total weight (empty)	408	Kg
Pipe diameter	110	mm

SAUF INDICATION CONTRAIRE:  
LES COTES SONT EN MILLIMETRES  
ETAT DE SURFACE:  
TOLERANCES:  
LINEAIRES:  
ANGULAIRES:

FINITION:  
CASSER LES  
ANGLES Vifs

NE PAS CHANGER L'ECHELLE

REVISION

NOM: SIGNATURE: DATE: 23/04/2014

TITRE:

### Tank 5000 L.

AUTEUR: JB  
VERIF.: DN  
APPR.: AM  
FAB.:  
QUAL.:

MATERIAU:

NO. DE PLAN

A3

ECHELLE: 1:20

FEUILLE 1 SUR 1

A3

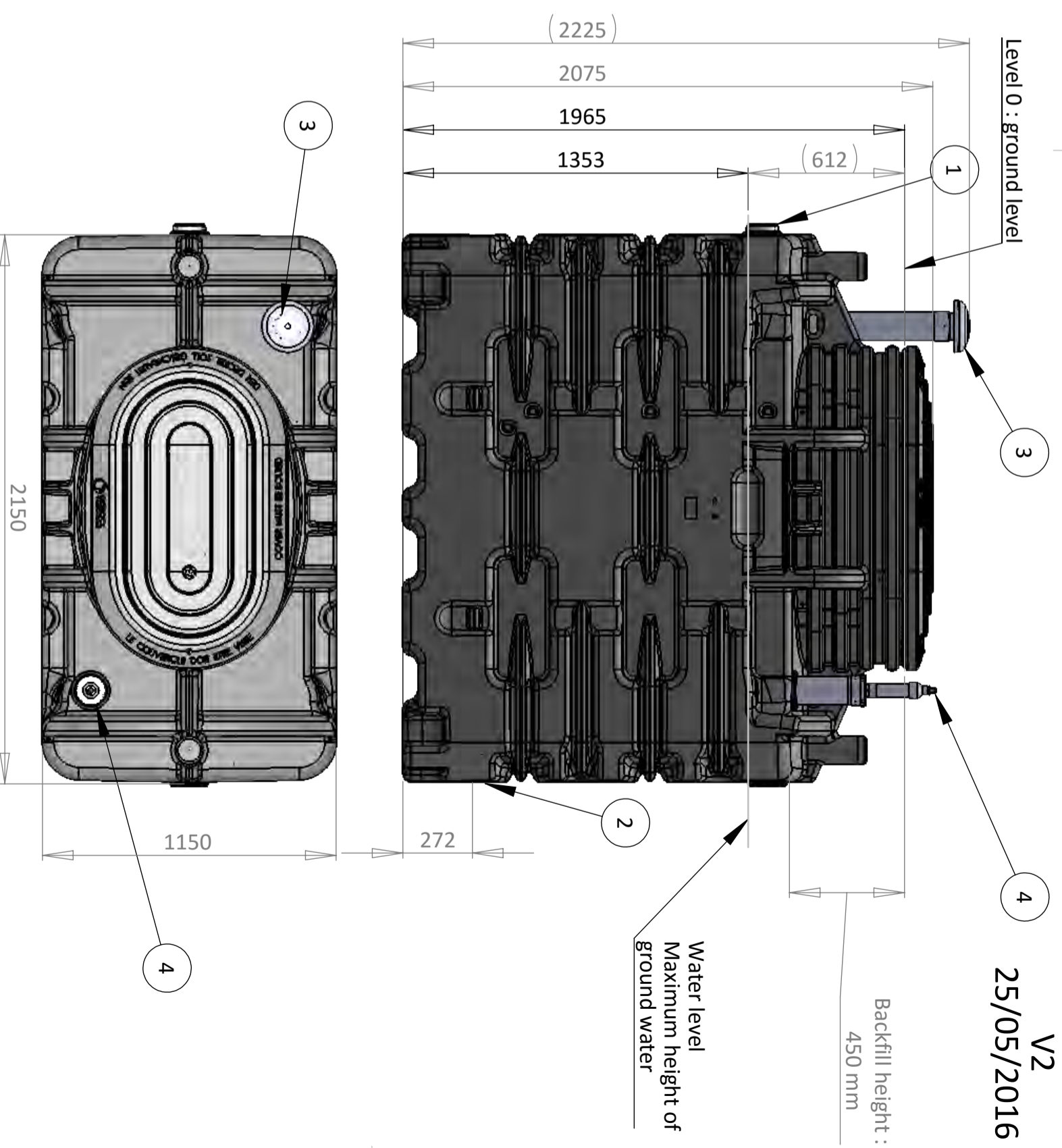
# Treatment Unit Tank Volume 3000 L

1	Water inlet
2	Water outlet
3	Air inlet
4	Overflow Alarm

Characteristics	Value	Unit
<b>ECOROCK-3000 Treatment Unit</b>		
Minimum volume of pre-treatment*		liters/PE
Capacity in population equivalent		PE
Daily volume of wastewater **		liters/day/PE
Daily hydraulic load		m <sup>3</sup> /day
Organic load per PE		gr. BOD <sub>5</sub> /PE/day
Organic load raw effluent up to		kg BOD <sub>5</sub> /day
<b>Specification</b>	<b>Value</b>	<b>Unit</b>
Volume tank	3000	Liters
Overall length	2150	mm
Overall width	1150	mm
Total height of the tank	2075	mm
Overall height (+ventilation pipe)	2225	mm
Total weight (without water)	200	Kg
Pipe diameter	110	mm

This treatment unit can be installed in high ground water table.

\*minimum 2000 liters of pre-treatment  
\*\*according to DIN EN 12566-3



V2  
25/05/2016

Backfill height :  
450 mm

Water level  
Maximum height of  
ground water

Overall tolerance : 3%

Service :

ORIGINATOR		DATE
NAME	SIGNATURE	29/04/2016
AUTHOR	TC	
APPROV.		
CHANGES		DATE
NAME	SIGNATURE	25/05/2016
AUTHOR	AQ	
APPROV.		
CHANGES		
AUTHOR		
APPROV.		

TITLE: \_\_\_\_\_

Nb. of PLAN \_\_\_\_\_

SCALE:1:20 \_\_\_\_\_

UT-X3000.2

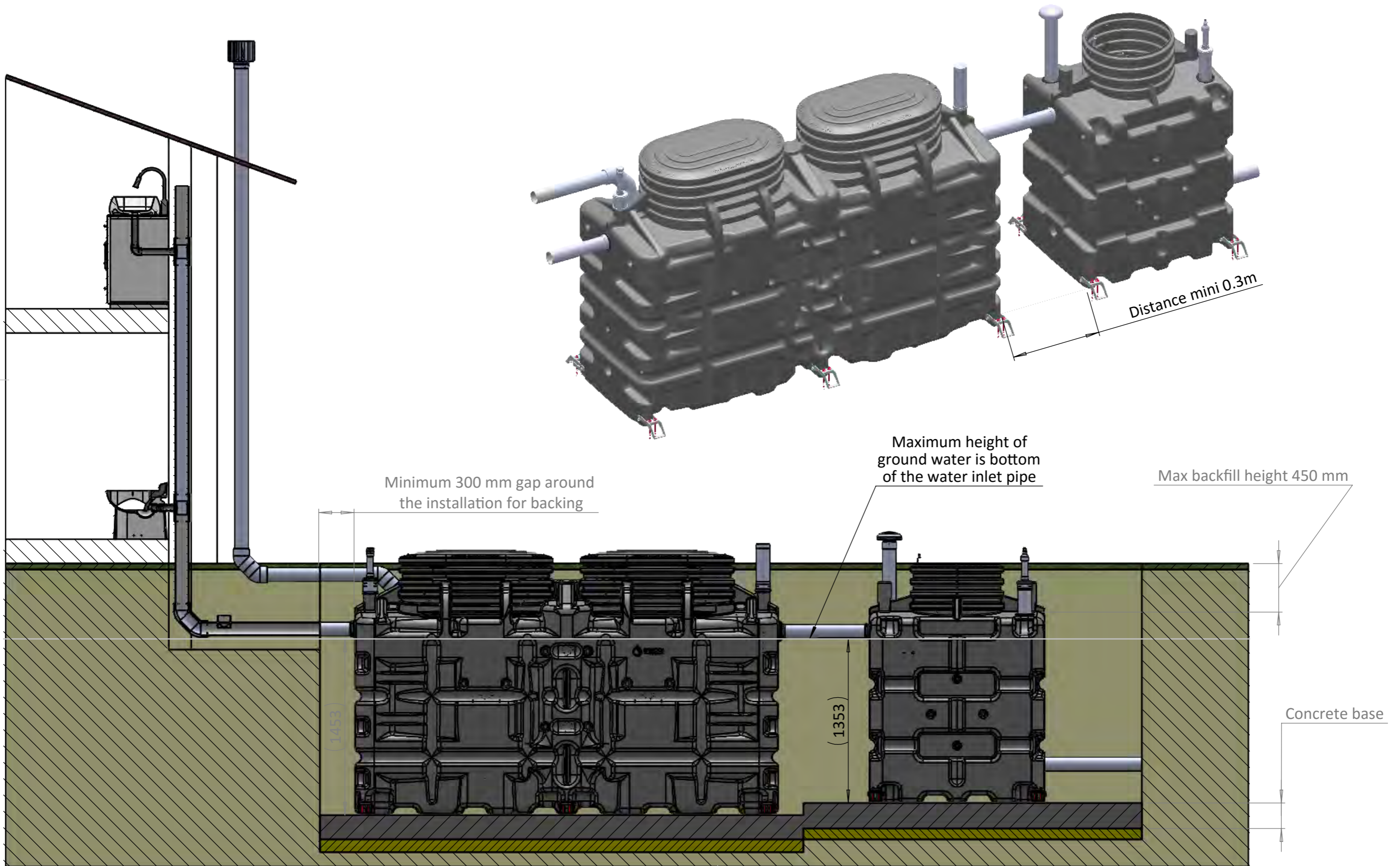
A3





# Installation in high ground water conditions BIOROCK-ST1-5000 + ECOROCK-3000

V1  
02/05/2016  
F-X10



# TREATMENT PERFORMANCE RESULTS

## BIOROCK Sewage Treatment Ltd

5300 Lakeside, Cheadle Royal Bus. Pk. Cheadle SK8 3GP

### EN 12566-3

Results corresponding to EN 12566-3 and S.R. 66

PIA-SR66-1703-1026

### BIOROCK

Aerobic biological gravity filter

Nominal organic daily load	0.27 kg/d			
Nominal hydraulic daily load	0.75 m <sup>3</sup> /d			
Material	Polyethylene			
Watertightness	Pass			
Crushing resistance (Pit test)	Pass (also wet conditions)			
Durability	Pass			
Treatment efficiency (nominal sequences)		Efficiency	Effluent	
		COD	96.3 %	26 mg/l
		BOD <sub>5</sub>	98.7 %	4 mg/l
		NH <sub>4</sub> -N*	90.5 %	3 mg/l
		SS	99.3 %	3 mg/l
Number of desludging	Not more than once			
Electrical consumption	0 kWh/d			

\*determined for temperatures  $\geq 12^{\circ}\text{C}$  in the bioreactor

Performance tested by:

**PIA – Prüfinstitut für Abwassertechnik GmbH**

**CSTB – Centre Scientifique et technique du Batiment**

**CERIB – Centre d'Etudes et de Recherche de l'INDustrie du Béton**

This document replaces neither the declaration of performance nor the CE marking.



Notified Body  
No.: 1739



Certified according to  
ISO 9001:2008



Elmar Lancé

March 2017