

BIOROCK® Sewage Treatment



Non-Electric



Low running costs



Completely silent



Odourless



Small footprint



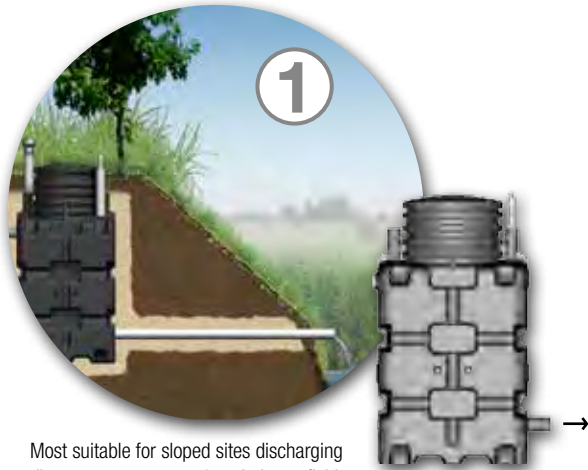
BIOROCK
sewage water treatment

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.

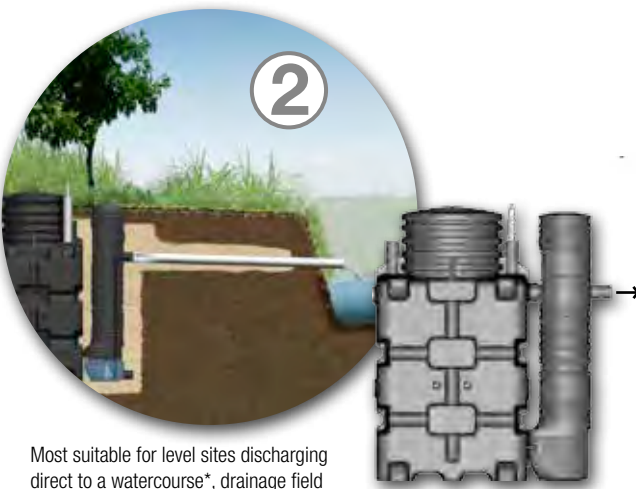
- Very Stable Inorganic material - does not break down over time, unlike "organic" media
- Requires little maintenance – scraping and scarification is not necessary, unlike for organic media
- The Structure and Composition ensures unsurpassed and unique surface treatment with exceptional purification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



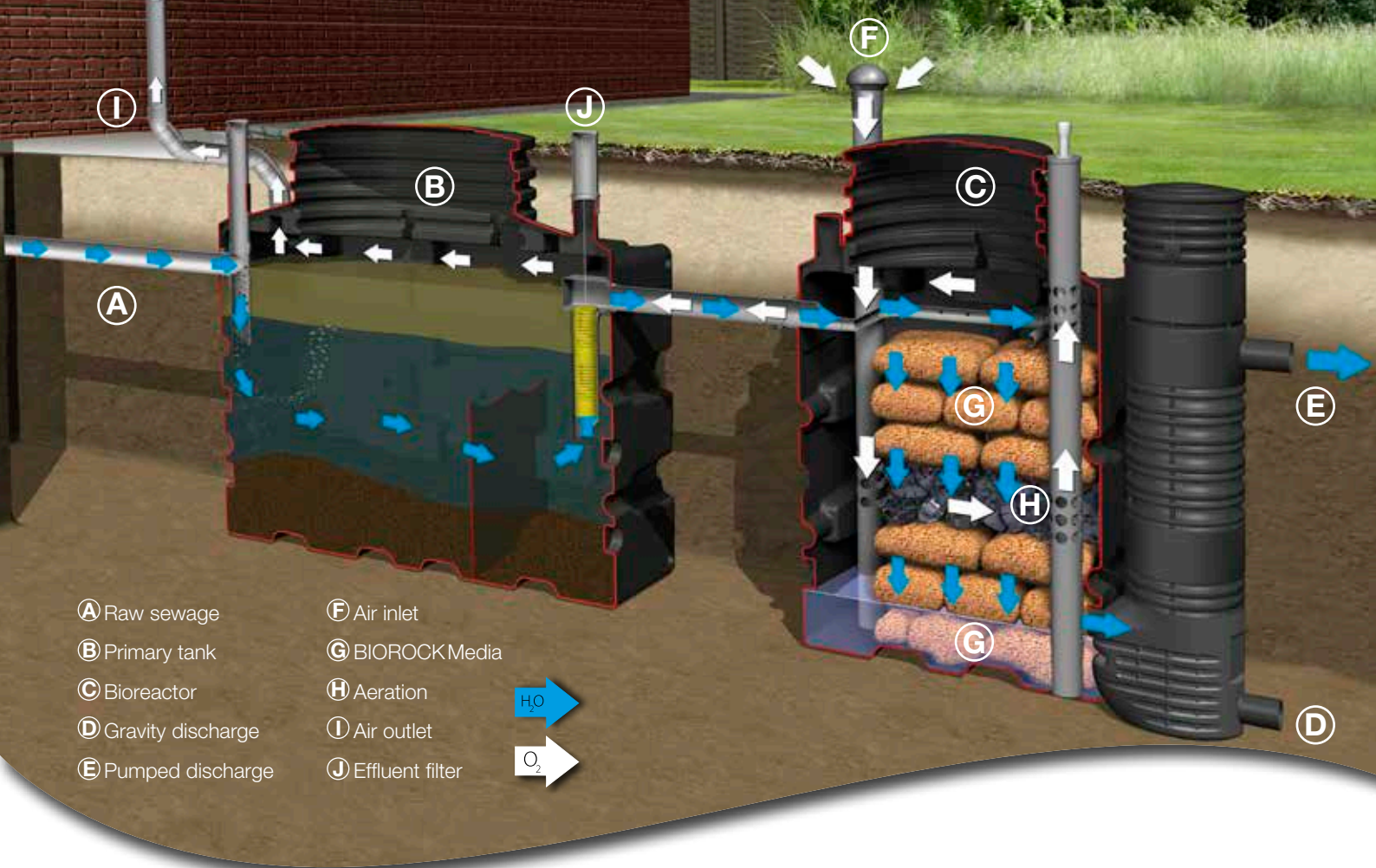
Most suitable for level sites discharging direct to a watercourse*, drainage field or raised bed.

*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

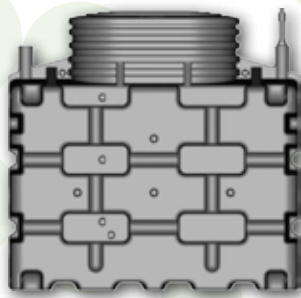
The BIOROCK® range of sewage treatment plants



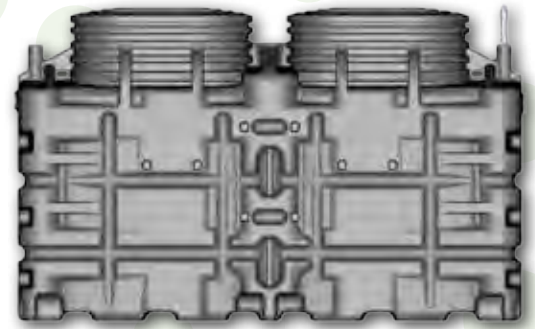
ECOROCK-1500



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 m	1098 mm	1213 mm

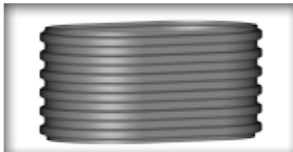
Purification results BIOROCK®

Tested conform EU Norm EN 12566-3 + A2		
BOD ₅	4 mg/l	99%
COD ₅	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



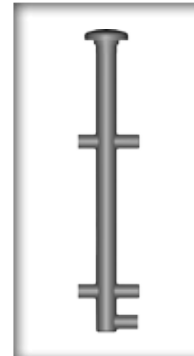
Extension set ø 700 x 1200 mm



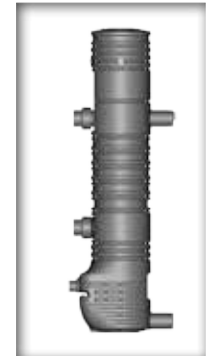
Extension set ø 400 mm



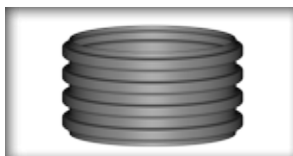
Mechanical fan ø 110 mm



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

email: 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



Primary tank

Tank volume 5000 L

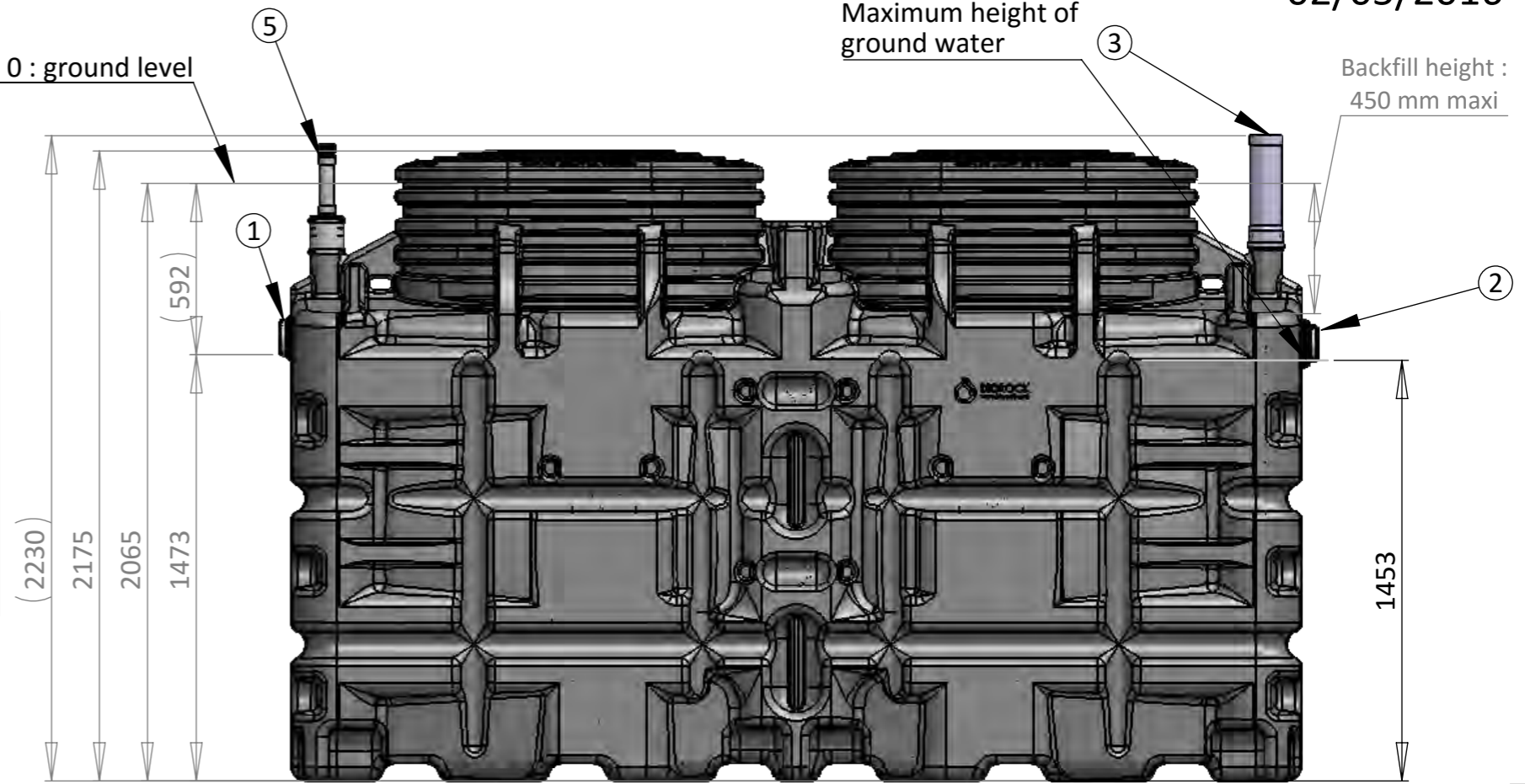
1	Water inlet
2	Water outlet
3	Access to effluent filter
4	Air outlet
5	Rodding point

Level 0 : ground level

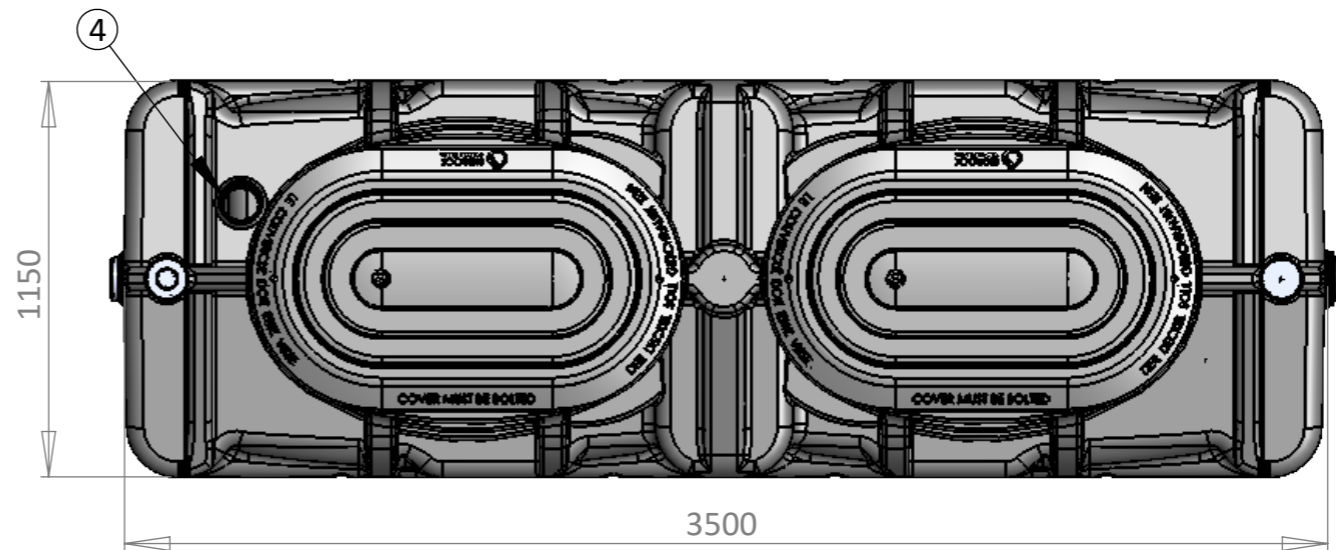
Water level
Maximum height of
ground water

V1
02/05/2016

Backfill height :
450 mm maxi



Characteristics	Value	Unit
Primary Tank (PT)		
Material	HDPE	
Minimum volume necessary	5000	Liters
Specification		
Overall length	3500	mm
Overall width	1150	mm
Total height of the tank	2175	mm
Overall height	2230	mm
Total weight (without water)	408	Kg
Pipe diameter	110	mm



This primary tank can be installed in high ground water table.

Overall tolerance : 3%

Service :

ORIGINATOR			
NAME	SIGNATURE	DATE	
AQ		02/05/2016	



CHANGES				TITLE:
NAME	SIGNATURE	DATE		

CHANGES				Nb. of PLAN
NAME	SIGNATURE	DATE		

SCALE:1:22

FTE-X5000

A3

Treatment Unit Tank Volume 2000 L

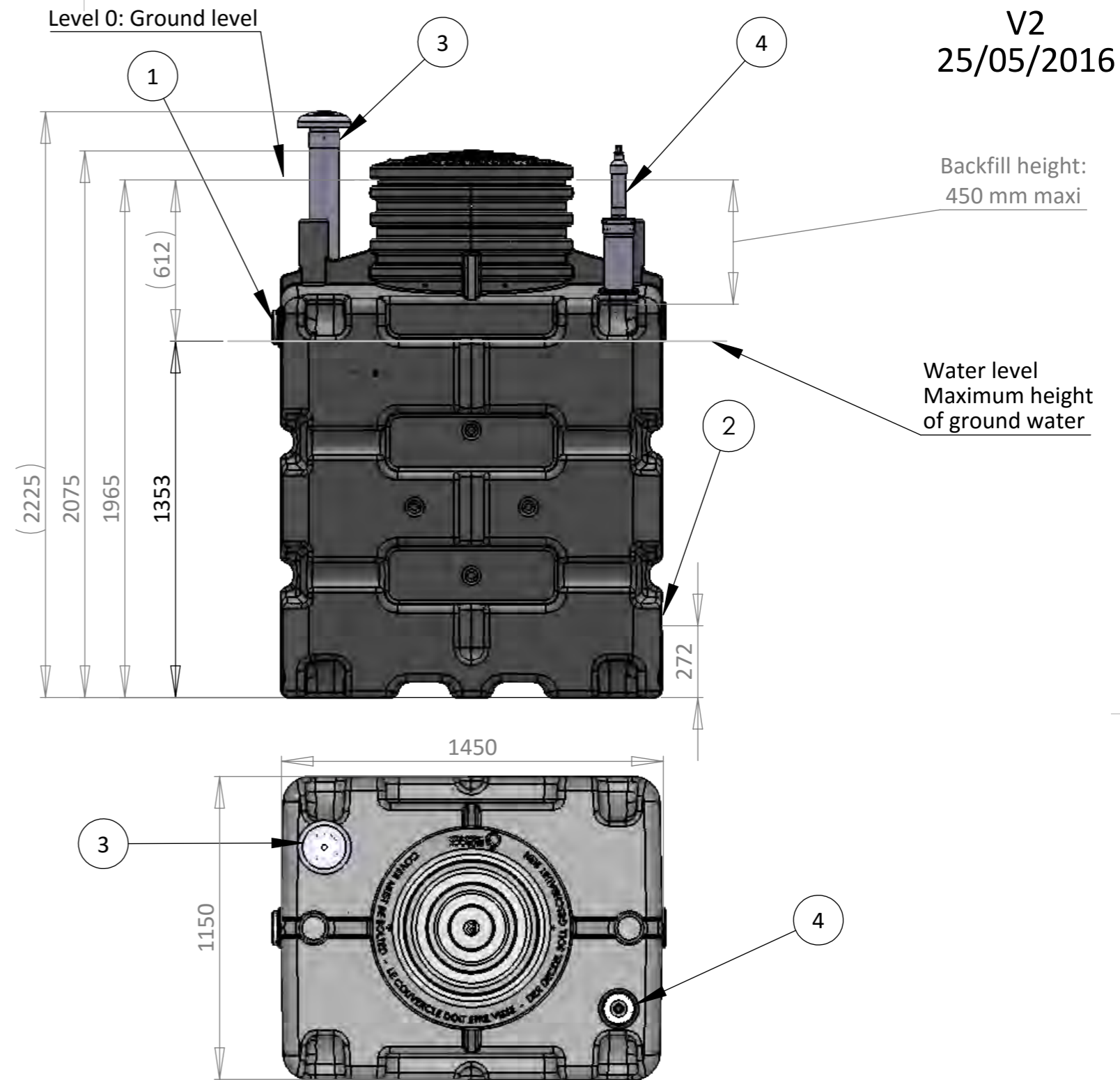
1	Water inlet
2	Water outlet
3	Air inlet
4	Overflow Alarm

Characteristics	Value	Unit
ECOROCK-2000 Treatment Unit		
Minimum volume of pre-treatment*		liters/PE
Capacity in population equivalent		PE
Daily volume of wastewater**		liters/day/PE
Daily hydraulic load		m ³ /day
Organic load per PE		gr.BOD ₅ /PE/day
Organic load raw effluent up to		kg BOD ₅ /day

Specification	Value	Unit
Tank Volume	2000	Liters
Overall length	1450	mm
Overall width	1150	mm
Total height of the tank	2075	mm
Overall height (+ventilation pipe)	2225	mm
Total weight (without water)	241	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

Service :

ORIGINATOR			
NAME	SIGNATURE	DATE	
AUTHOR: AQ		12/05/2016	
APPROV.			
CHANGES			
NAME	SIGNATURE	DATE	TITLE:
AUTHOR: AQ		12/05/2016	
APPROV.			
CHANGES			
AUTHOR:			Nb. of PLAN
APPROV.			UT-X2000

Overall tolerance: 3%

SCALE:1:20

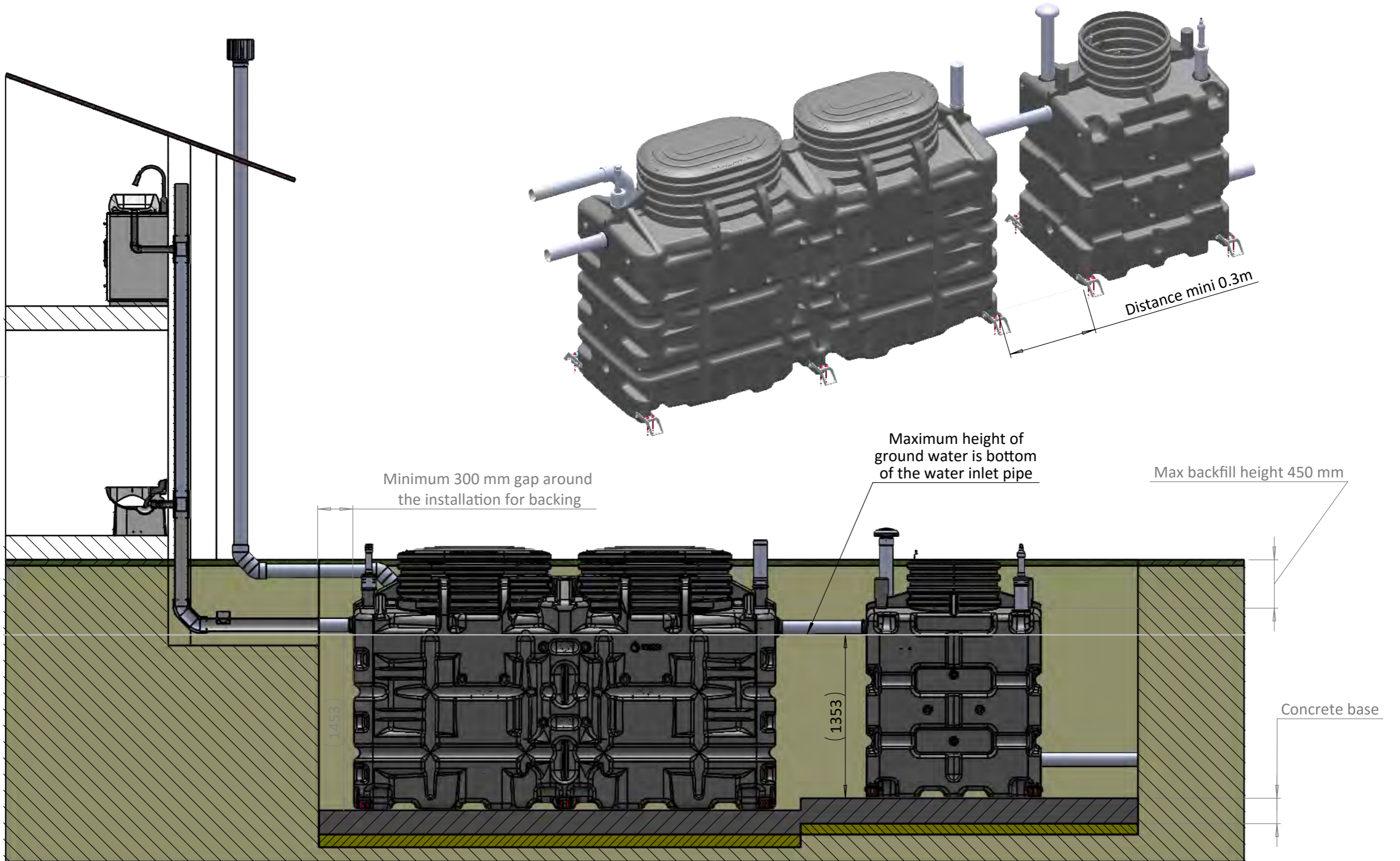
A3





Installation in high ground water conditions BIOROCK-ST1-5000 + ECOROCK-2000

V1
02/05/2016
F-X10



Minimum 300 mm gap around the installation for backing

Maximum height of ground water is bottom of the water inlet pipe

Max backfill height 450 mm

Distance mini 0.3m

1453

1353

Concrete base

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 ³ /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 ₅	98.7 % 4 mg/l
		NH ₄ -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