



# The BE Biodigester Packaged Sewage Treatment System

The logo graphic for Devtek Tanks is located on the left side of the slide. It features a dark grey rectangular background at the top with the text 'DEVTEK TANKS' in white, bold, uppercase letters. Below this, there are several thin, white, curved lines that sweep across the width of the graphic, transitioning into a blue area at the bottom. The blue area is filled with many thin, horizontal, wavy lines, creating a textured, water-like effect.

## DEVTEK TANKS

**Devtek Prime Edge Ltd** with her **Devtek Tanks** brand is a water and environmental service company in Nigeria.

**Devtek Tanks** partners with **Burnham Environmental Services**, which is one of UK's leading manufacturer of sewage treatment systems, to deliver The **BE BIODIGESTER** in Nigeria.

The **BE BIODIGESTER** is a packaged sewage treatment plant backed up by the UK designers' 45 years of sewage treatment experience.

The **BE BIODIGESTER** sewage treatment plant are used where there is no mains drainage available, for example; Housing development:

- Hotels
- Public houses
- Industrial sites
- Hospitals
- Leisure facilities

**Devtek Tanks** in partnership with Burnham Environmental Services provides technical support in all aspect of design, installation and maintenance.

## BE BIODIGESTER SEWAGE TREATMENT PLANTS



The majority of houses in Nigeria are not linked to the public sewerage system where you have little to worry about, because it is mains drainage.

There are basically three options in disposal of off-mains wastewater:

- Cesspool
- Septic tank
- Packaged Sewage Treatment Plant

Choosing the right sewage treatment and disposal method for site is essential to ensure value for money, effective long-term performance, protection of public health and the environment, and compliance with relevant legislation.

Of the above options the cesspool and the septic tanks effluent has high level of contaminants that it cannot be exposed to the environment. Packaged sewage treatment plant is always a better option especially if you are getting the right one.

Our **BE BIODIGESTER** sewage treatment plant is designed to produce effluent with a BOD 5\* of 20 mg/l. In comparison, a septic tank produces a BOD of 400 mg/l.

The **BE BIODIGESTER** is a substantial GRP (Glassfibre reinforced polymer) vessel packaged sewage treatment plant designed for unobtrusive underground installation.

The Biodigester Sewage Treatment plant is designed to produce effluent quality of

- BOD 5\* 20 mg/l
- Suspended Solids 30mg/l
- Ammoniacal Nitrogen(as N) 20mg/l

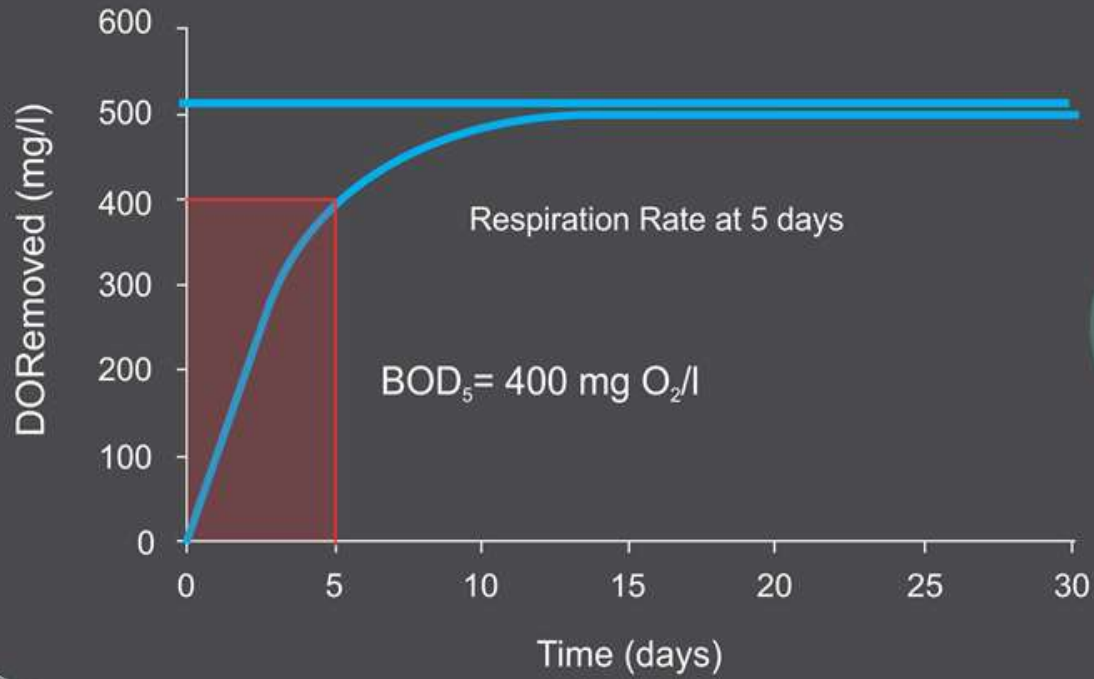




The final effluent produced is a clear odourless liquid suitable for discharge into a watercourse or a system of soakaway trenches. (More stringent effluent qualities may also be catered for.)

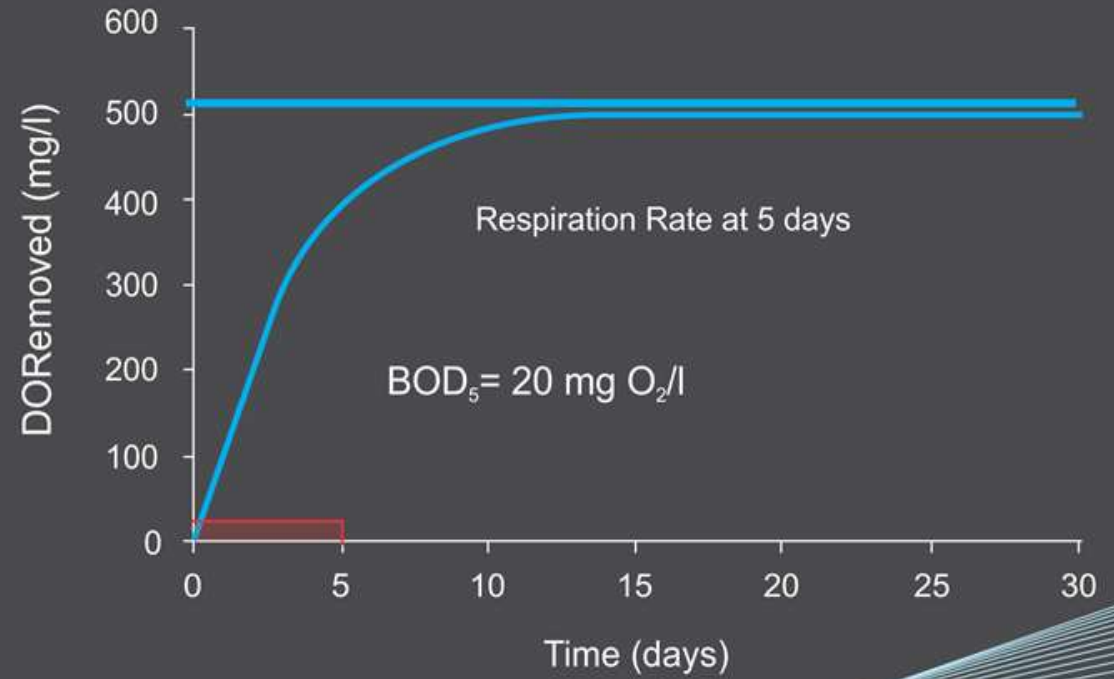
The Biodigester sewage treatment plant has been tested to EN12566 Pt 3 and has a CE Mark in Europe. The Biodigester has also been independently tested in the USA and has been approved to the highest level Class 'A'.

## SEPTIC TANK



VS

## SEWAGE TREATMENT PLANTS



The **BE BIODIGESTER** sewage treatment plant range has three types with various models:

**T-RANGE BIODIGESTER**

- T16 NS1
- T24 NS1
- T32 NS1
- T40 NS1
- T48 NS1
- T56 NS1

**BONUS RANGE BIODIGESTER**

- B45 NS1
- B60 NS1
- B75 NS1
- B90 NS1
- B105 NS1

**STANDARD RANGE BIODIGESTER**

- Project specific custom built



## THE T-RANGE BIODIGESTER

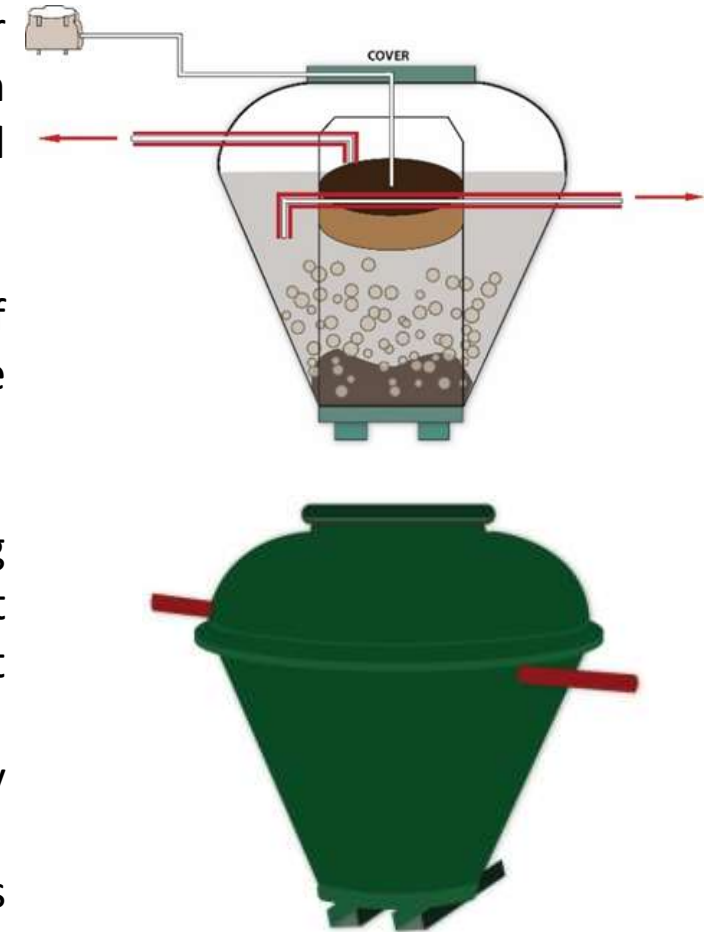
The Biodigester 'T' range is a unique 'Hybrid Design' with plastic media for process stability and efficiency. The product also has continuous recirculation driven by the 'Air Lift Affect', consequently there is no stored septic sludge and the Biodigester is uniquely guaranteed to operate without odour.

It provides a much higher level of treatment. By providing a constant flow of air, the treatment plant is able to utilise aerobic bacteria, which degrade the sewage to a high level.

The multi-chamber design allows re-circulation of Activated Sludge, ensuring that the plant remains aerobic. Inclusion of plastic media within the treatment plant provides a large surface area for the bacteria to adhere to, whilst ensuring mobility of the bacteria for rapid degradation of solid matter.

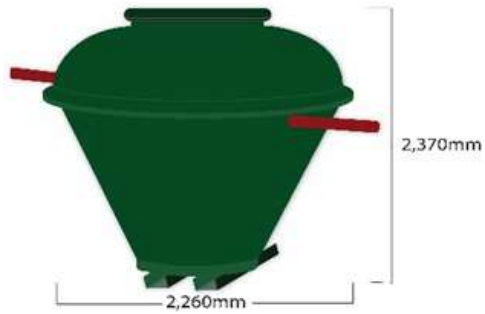
The T Range Biodigester treatment plant provides the modern environmentally friendly alternative to malodorous septic tanks and cesspools.

The substantial retained volume of the T range Biodigester provides a class leading prolonged emptying interval of typically 3 years.



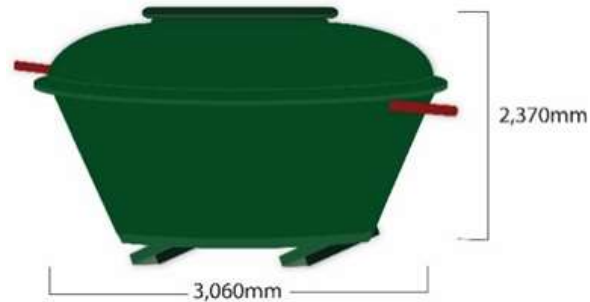


## T-RANGE BIODIGESTER OPTIONS



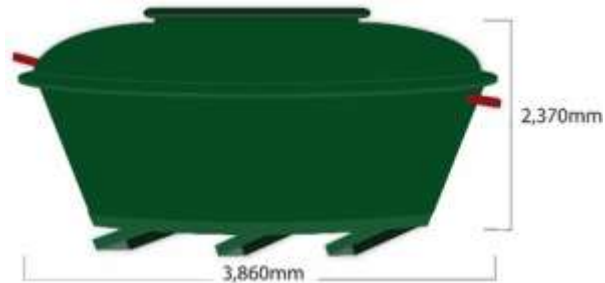
### **T16 Biodigester – 16 persons**

Size: 2260mm wide and 2370mm deep  
Standard inlet drain depth 600mm



### **T24 Biodigester – 24 persons**

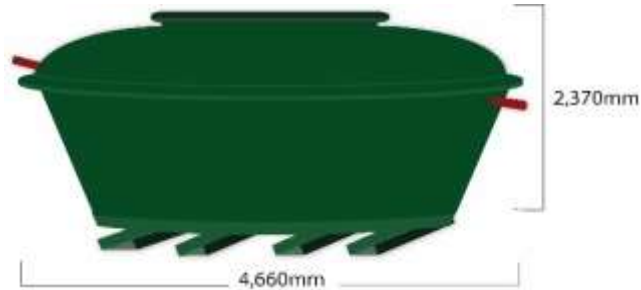
Size: 2260mm wide, 2370mm deep and  
3060mm long  
Standard inlet drain depth 600mm



### **T32 Biodigester – 32 persons**

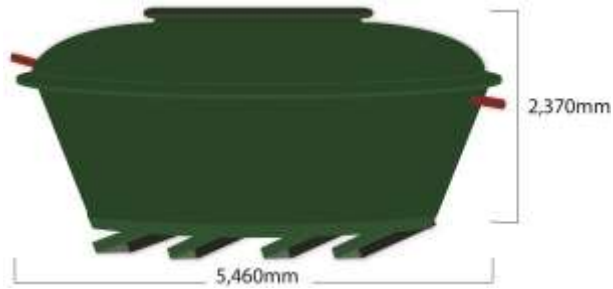
Size: 2260mm wide, 2370mm deep and  
3860mm long  
Standard inlet drain depth 600mm

## T-RANGE BIODIGESTER OPTIONS



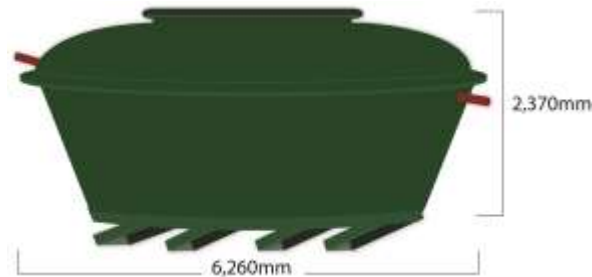
### **T40 Biodigester – 40 persons**

Size: 2260mm wide, 2370mm deep and  
4660mm long  
Standard inlet drain depth 600mm



### **T48 Biodigester – 48 persons**

Size: 2260mm wide, 2370mm deep and  
5460mm long  
Standard inlet drain depth 600mm

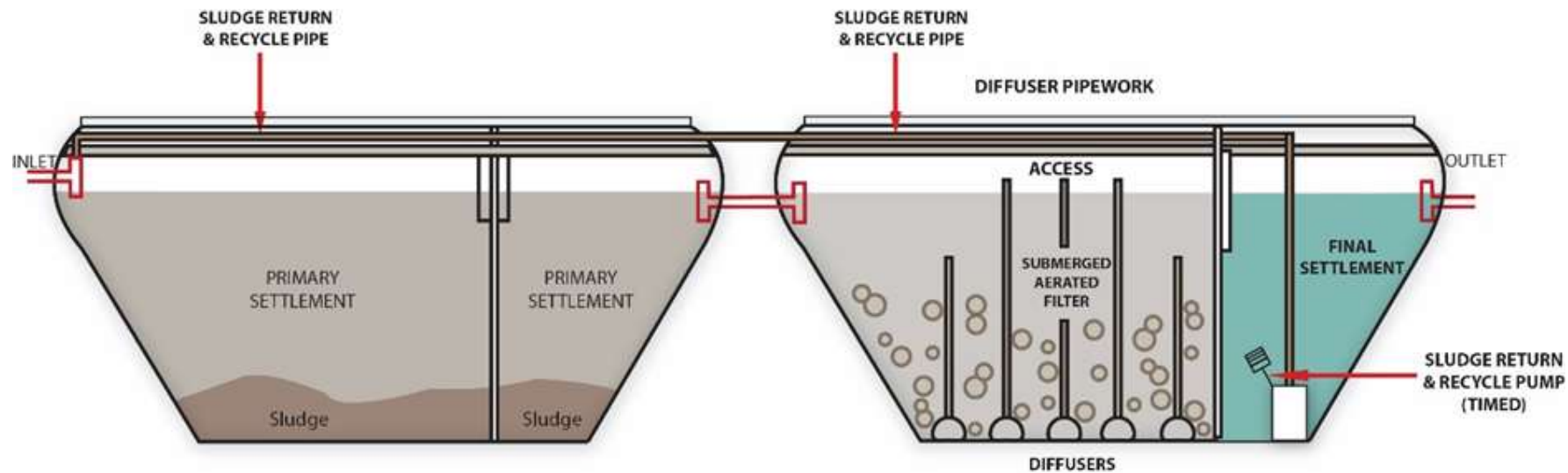


### **T56 Biodigester – 56 persons**

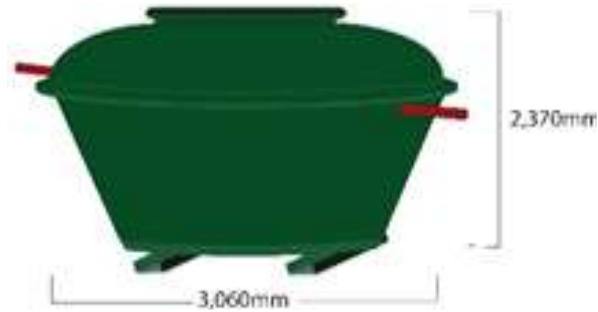
Size: 2260mm wide, 2370mm deep and  
6260mm long  
Standard inlet drain depth 600mm

# THE BONUS RANGE BIODIGESTER

The **Biodigester Bonus** is an **add-on sewage treatment** plant that encloses 2 stages of treatment, the Submerged Aerated Filter SAF and Final settlement with an automatic sludge return and recycling system. It may be supplied with a new primary settlement tank or may be **added after an existing septic tank** subject to suitability checks. Existing septic tanks can be converted to the primary settlement tank of the Bonus Biodigester.

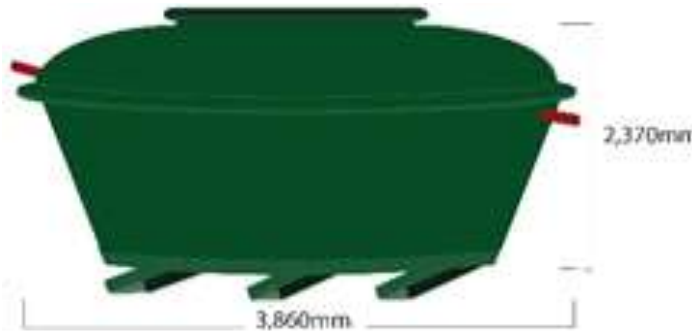


## BONUS RANGE BIODIGESTER OPTIONS



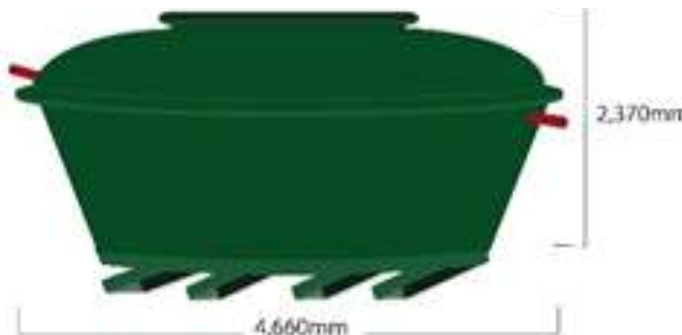
### **B45 Biodigester – 45 Persons**

Size: 2260mm wide, 2370mm deep and 3060mm long  
Standard inlet drain depth 600mm  
Primary Settlement tank volume  
Require 6750L



### **B60 Biodigester – 60 persons**

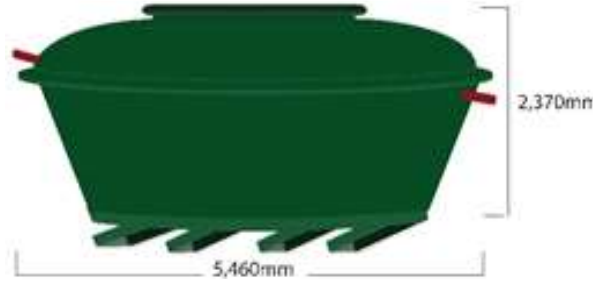
Size: 2260mm wide, 2370mm deep and 3860mm long  
Standard inlet drain depth 600mm  
Primary Settlement tank volume  
Require 9000L



### **B75 Biodigester – 75 persons**

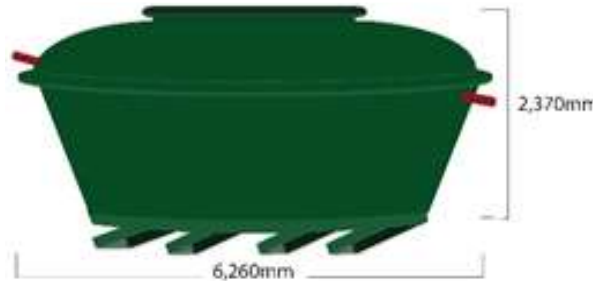
Size: 2260mm wide, 2370mm deep and 4660mm long  
Standard inlet drain depth 600mm  
Primary Settlement tank volume  
Require 11,250L

## BONUS RANGE BIODIGESTER OPTIONS



### **B90 Biodigester – 90 persons**

Size: 2260mm wide, 2370mm deep and 5460mm long  
Standard inlet drain depth 600mm  
Primary Settlement tank volume Require 13,500L



### **B105 Biodigester – 105 persons**

Size: 2260mm wide, 2370mm deep and 6260mm long  
Standard inlet drain depth 600mm  
Primary Settlement tank volume Require 15,750L

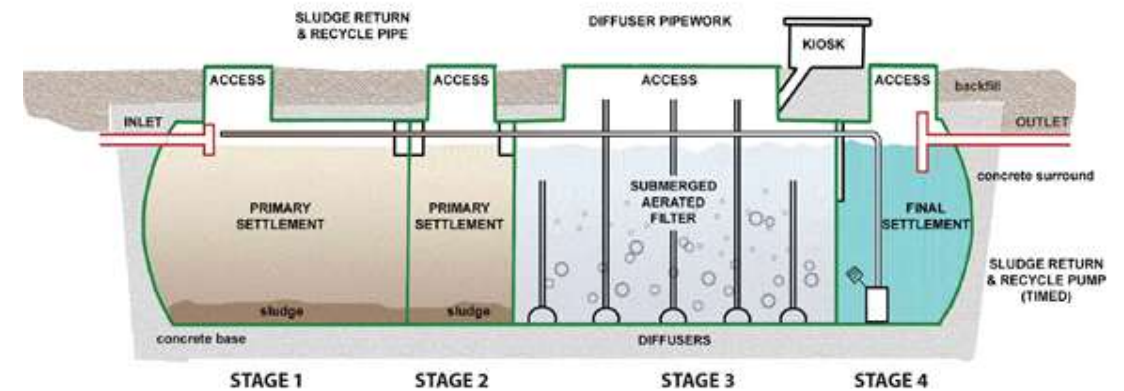
# THE STANDARD RANGE BIODIGESTER

The Biodigester Standard Range is a bespoke system of four chamber glassfibre GRP tanks, for the four stages of treatment, suitable for 200 populations and above. They are custom built for specific projects.

**Stages 1 & 2** – Primary settlement and storage of solids. The majority of suspended solids are settled as they pass through the two primary settlement tanks. Additional secondary/humus solids returned by the sludge pump/recycling system are also stored.

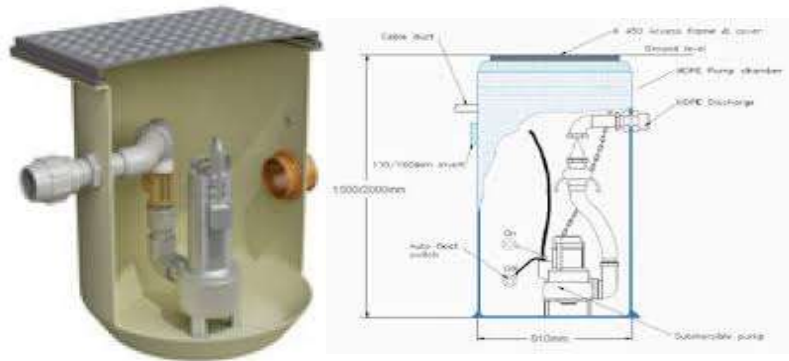
**Stage 3** – Submerged aerated filter. Continuous aeration of the submerged mobile plastic creates a suitable environment for aerobic micro-organism to grow both attached to the media and in suspension. This provides the substantial degradation of the settled sewage necessary to meet stringent effluent quality regulations. The process generates secondary or humus solids. The air blower and controls are housed above ground.

**Stage 4** – The final settlement tank collects the secondary or humus solids which are automatically returned to the primary settlement tanks by the timed sludge return and recycle pump. Substantial recycling of the effluent greatly enhances process efficiency, particularly at sites with variable loading.



STANDARD RANGE BIODIGESTER

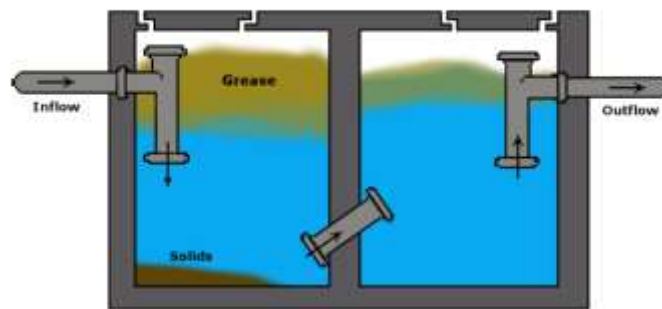
## EXTRA ADD-ONS



PACKAGED PUMPING STATIONS



SAMPLE CHAMBERS



GREASE TRAPS



ALARM SYSTEM

# INSTALLATION

## Summary method

1. Excavate a hole 300mm wider and 200mm deeper than the relevant unit.
  2. Check the water table. If there is any chance of the water rising above the base of the unit then the Wet Ground method must be used.
  3. Install 200mm base of concrete.
  4. Place BIODIGESTER onto the base, work ribs into base and check levels carefully.
  5. Fill the BIODIGESTER with water.
  6. If you have a high water table the Wet Ground anchors must be covered with at least 250mm of concrete to the minimum quantity specified by the data sheet.
  7. Backfill with gravel or concrete as preferred.
- Contact us for more detailed installation information and specifications.



## AFTER SALES SERVICE

We offer various after sales maintenance services based on bespoke agreement with clients.

These services include;

- Periodic inspections;
- Routine/ Scheduled Repairs and replacement of parts as needed;
- Emergency repairs.

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