

econo-treat

Econotreat VBB-P-2000 Treatment System

System Specifications & Installation Instructions



ECONOTREAT VBB-P-2000

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New Zealand's Leaders in Advanced Secondary Treatment Systems

Tank Specifications

Tanks are made of injection molded plastic, which is suitable material for wastewater treatment containment meeting all the requirements of Section 4.3.3 of AS/NZS 1547:2012. These tanks have an expected lifespan of 50 years.

Dual Chamber Septic Tank (Pump Chamber inside)

3200L Nominal Capacity
2000mm Diameter
2038mm High

Aeration Tank

3200L Nominal Capacity
2000mm Diameter
2038mm High

Installation Location and Certification

These tanks are not designed for vehicle loads and shall be located no closer than 2m to a driveway, road frontage or a building. If for any reason the tank is located where vehicle traffic may drive over the tank or approach closer than 2m, or where it may be trampled on by farm stock then the tank should be protected by a concrete slab designed to support these loads. Surface water must also be diverted from flowing into the installation.

Installation must be certified to AS/NZS 1547:2012, the certificate to be issued and held by the regulatory authority.

High Water Table Installations

All tanks have been engineered and designed for maximum strength, in accordance with the NZC 3604. Clauses B1 and B2 for structure and durability, to withstand any hydraulic pressures, both lateral and uplift, created by high water table conditions.

In all situations, the tanks should be installed with the supplied dead men anchors.

In all installation situations, it is important to fill the tanks with water. This removes the hydraulic uplift and simplifies the installation. In extremely high-water tables, cement can be added to fine metal to create a mass around the dead men anchors secured to the tanks (alternately concrete could be used). Waterflow must be made aware of this early on in view of supplying a tank that is fit for purpose.

Plumbing Pipes and Fittings

All internal plumbing is done with PVC pipes with appropriate connections according to AS/NZS 1260 and AS/NZS 4130.

Backfill and Bedding

Place and bed to NZBC G13/AS2, using compacted granular metal, in layers not exceeding 100mm.

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Electrical

Where a pump is required on a flat site electrical connection must be installed according to AS/NZS 3000 and the control and alarm system must be in a weatherproof housing located in a readily visible position.

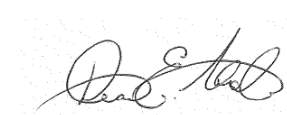
Warranty

WATERFLOW NZ LTD warrants that the Econotreat System will be free from defects in material and workmanship for the following periods of time from the date of installation as set out in the following conditions:

1. Concrete Tank 15yrs
2. Injection Molded Tanks 15yrs
3. Nitto Blower 2yrs
4. Irrigation Pumps 2yrs
5. Warranty of Operation covers the performance of the NaturalFlow System as connected to the effluent inflow for which they are designed, and has been installed to the criteria as set out in the relative installation instructions and procedures, and has an assigned Service/Maintenance contract in place with Waterflow NZ Ltd or it's appointed agent/s.

Warranty excludes defects due to:

- A) Failure to use the system in accordance with owner's manual.
- B) A force majeure event outside the reasonable control of WATERFLOW NZ LTD such as (but not limited to) earthquake, fire, flood, soil subsidence, ground water table variations or plumbing fault.
- C) Modifications to surrounding landscape contour after installation
- D) The actions of a third party
- E) The system required to bear loads (either hydraulic or biological) greater than that for which it was designed
- F) Any modifications or repairs undertaken without the consent of WATERFLOW NZ LTD
- G) Failure, where applicable, to fence and plant disposal field.



1st June 2014
Dean Hoyle
Managing Director

If in doubt contact the experts on 0800 SEWAGE or sales@waterflow.co.nz

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The Econotreat system is to be installed or signed off by a registered Drain layer to the design specified by Waterflow NZ Ltd.

The following installation instructions and procedures followed correctly will ensure System performance is not compromised in any way.

1. Excavate two 2.5m x 2.5m level platforms at an appropriate depth to ensure adequate fall for inlet pipe from the source. This has to be installed into virgin ground. The two platforms are to be on the same level and next to each other.



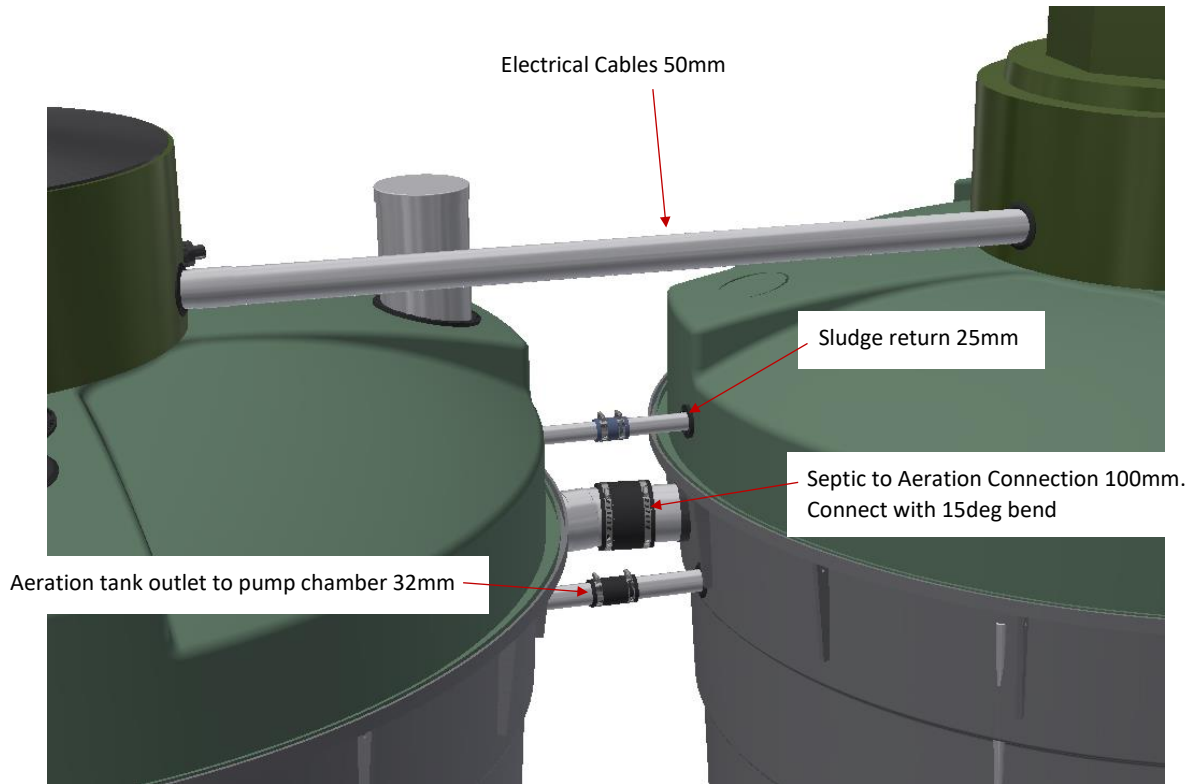
2. Lay 100mm of bedding metal on platform and place the Septic and Aeration tanks next to each other. They will need to be pulled together so the connection pipes touch. Take a photo of this for Waterflow signoff. If possible, it is good practice to install a drain coil out from the bottom of the excavation to ground level; this obviously requires sufficient slope and won't work on a flat site.

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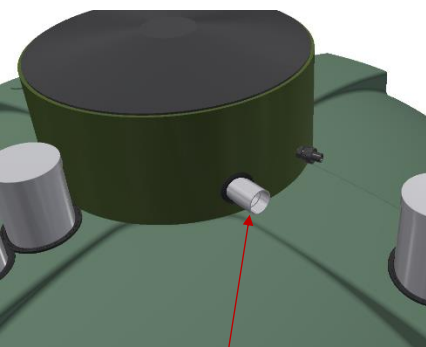
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- Now the cables are pulled through, you can push the tanks tight together, so that the connection pipes are aligned (they do have some movement if they aren't quite straight). Then connect them using the supplied rubber couplings and take a photo for signoff.



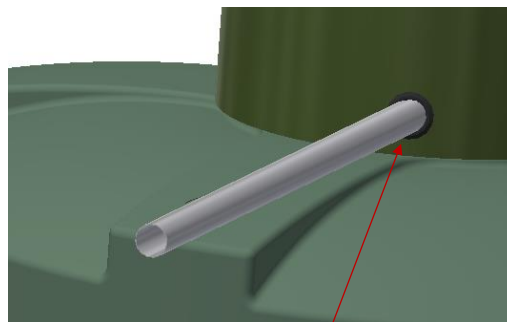
- There will be a length of 50mm DWV supplied for a power conduit. This is fitted through predrilled holes in the risers, allowing the pump plug and high-level alarm wire to be fed back to the control box. Fit 50mm DWV as per below diagrams:

a.



50mm pipe and connector
prefitted to septic riser

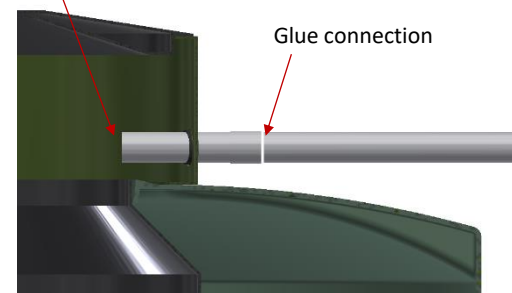
b.



Fit 1.5m length to treatment riser using
predrilled hole and uniseal supplied

c.

Knock through to connect pipes



Line the pipes up, glue the ends and
then knock the short length onto the
end of the long one.

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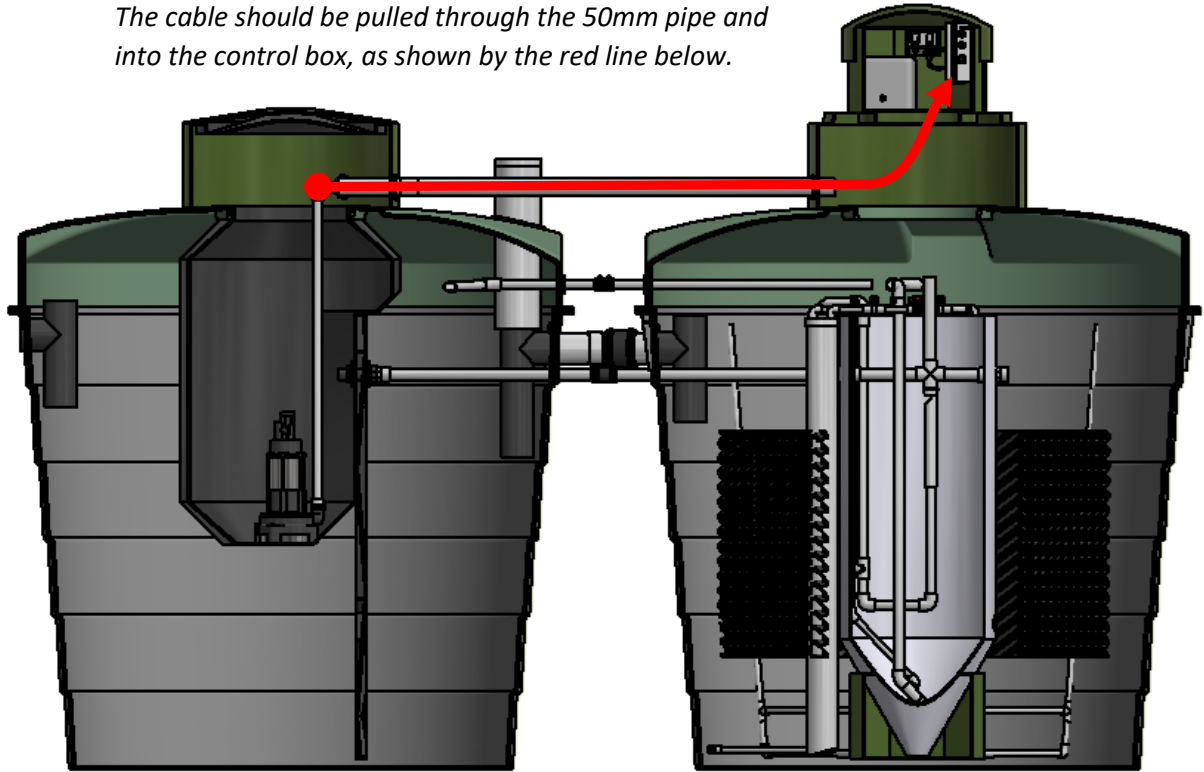
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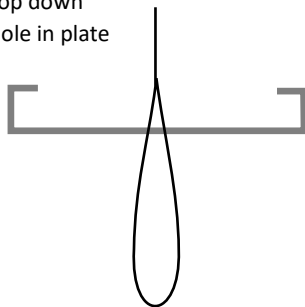
5. Inside the pump chamber (found in the middle of the septic tank), you will find a pump cord and alarm float coiled up. These need threading through the 50mm DWV conduit and plugging in to the controlled in the treatment tank.

The cable should be pulled through the 50mm pipe and into the control box, as shown by the red line below.

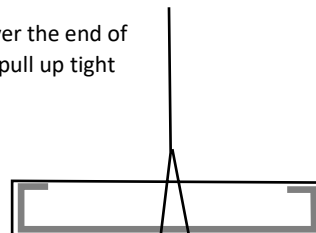


6. Add 8 uplift restraint plates to hold the tanks securely in the ground, 4 on each tank (these are normally packed in the pump chamber). Wires must be hanging tight before backfilling, not loose, they are designed to hold the plates 50-100mm above the bottom of the tank. Take a photo of this before backfilling for Waterflow signoff.

A. Pass loop down through hole in plate



B. Pull loop over the end of the plate and pull up tight



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C. 4 x Uplift restraint plates tied to each tank

7. Put 6,000L of water in the tanks to resist uplift before back filling. This will prevent the hydraulic forces from lifting them out of the ground. Check out “Water Filling Instructions” later in this manual.
8. Back fill around tanks. Using loose friable spoil from the excavation is fine, be aware that this will settle over time though; granular metal is recommended. Do not compact soil directly on top of the tanks or backfill over top of the tank with heavy clay; granular metal or topsoil should be used.
9. Trench from Dose Chamber outlet to disposal field and lay the 25mm alkathene feed line.

Caution: System must be protected from excessive super imposed loads both lateral and top loads. E.g. loads from vehicular traffic. There needs to be at least 2m of clearance maintained around system.

High Water Table: When installing in a high-water table, put 6,000L of water in the tanks to resist uplift before back filling. This will prevent the hydraulic forces from lifting them out of the ground. ALWAYS USE DEAD-MEN ANCHORS.

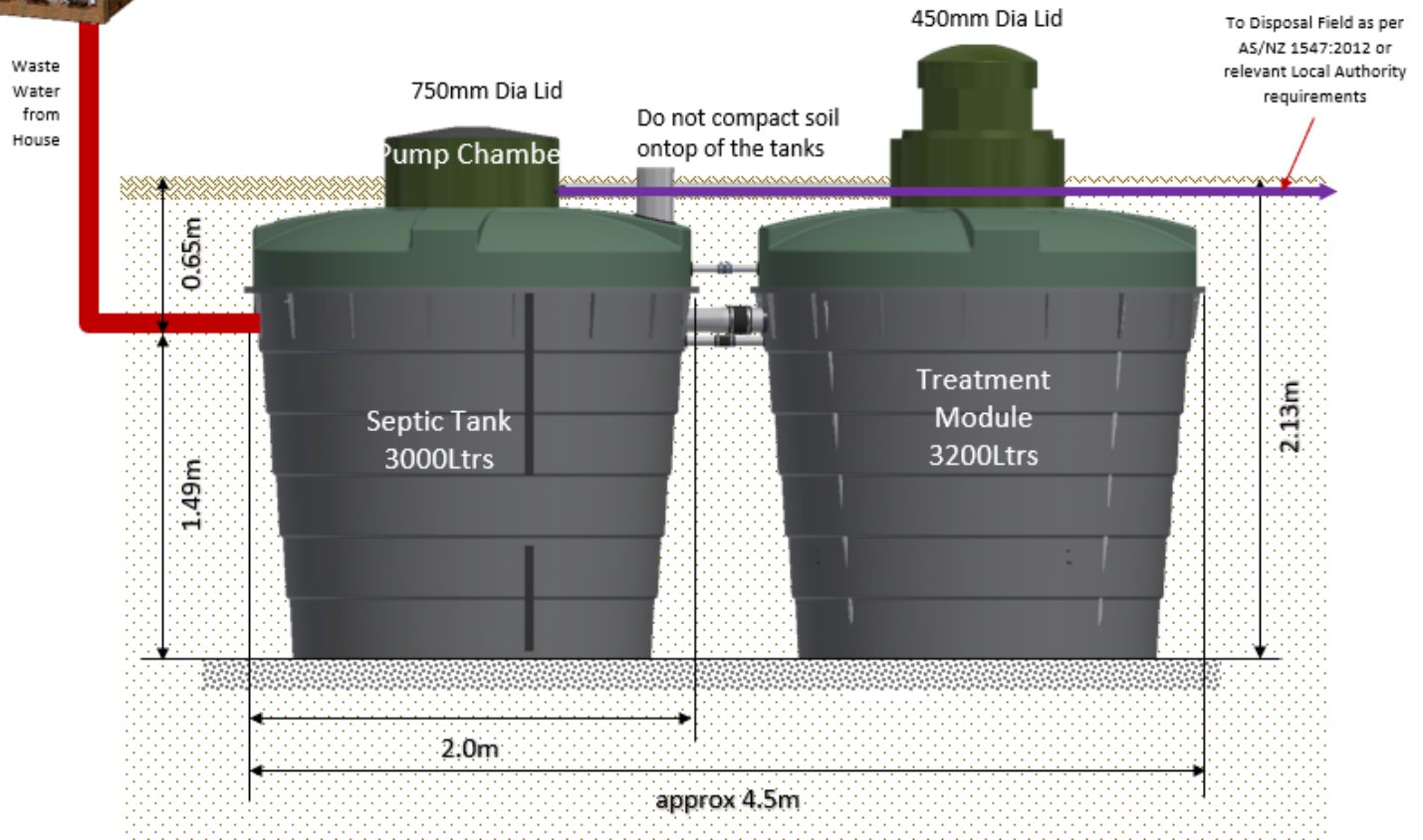
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Econotreat VBB-P-2000 Schematic Drawings



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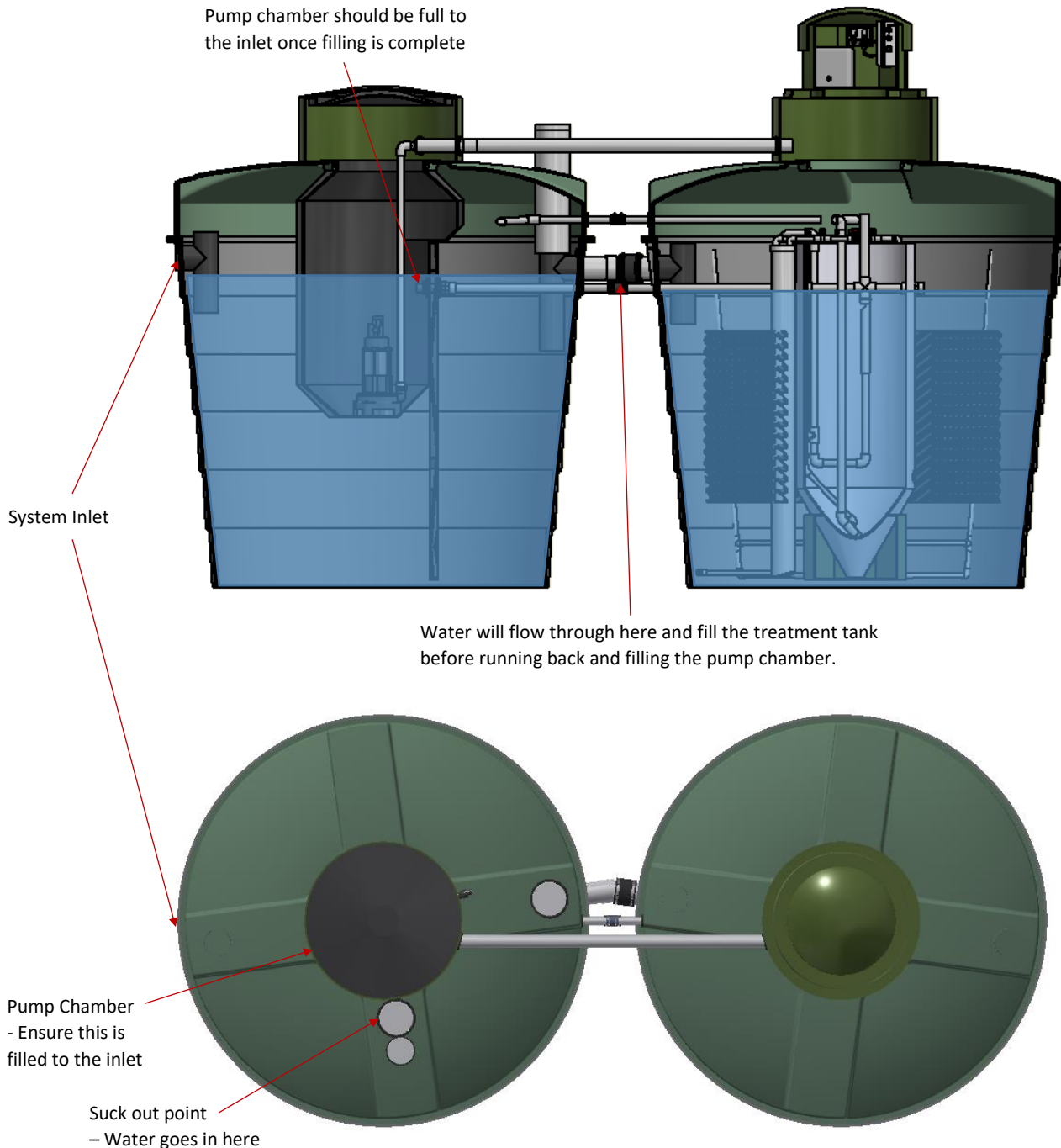
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Water Filling Instructions

It is important to fill the tanks correctly to ensure they are full, otherwise hydraulic forces could displace the tanks before the ground has completely settled again; it takes about 12 months or more for the ground to settle around the tank.

1. Remove the 150mm cap from the inspection and suck out access point, insert the hose here
2. Fill the tank until the pump chamber is full of water, by this time the entire system will be full.



If in doubt contact the experts on 0800 SEWAGE or sales@waterflow.co.nz



"Making it Easy"

Call us today to discuss your needs

0800 SEWAGE

Or for more information www.waterflow.co.nz



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