EuroTank TER 3

Packaged Tertiary Treatment unit

Owner's Manual

Version TER3 1.1 2026/P6/P8

Designed Tested Accordance with EN 12566-7

Note: This manual is only a general installation guide. Installation methods and conditions will vary with each individual site. We take no responsibility for installation. Please ensure that the person installing your sewerage treatment systems is suitably qualified, experienced and insured. We recommend that the installation of every system is planned and supervised by an experienced engineer with professional indemnity insurance. If uncertain about any element of the installation please contact our office. Installation & Supervision service available on request.

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1.0 General Information

This manual provides an explanatory report on the installation, treatment and technical drawings in relation to the Eurotank Ter3 sewage treatment plant. It is important to read this manual in its entirety before installation and use, as this manual represents a general guide to the best practice for the installation of the sewage treatment plant. This manual should not be used for any other system.
The instructions in this manual are of a general nature. Therefore, for each installation it is important to consult an appropriately trained or qualified person to ensure that this product is acceptable for your specific site conditions. This manual should be kept in possession of the owner for the lifetime of the product. Should the system be transferred to a new owner, it is important that this manual is also transferred to allow the new owner to become familiar with the operation and appropriate warnings.

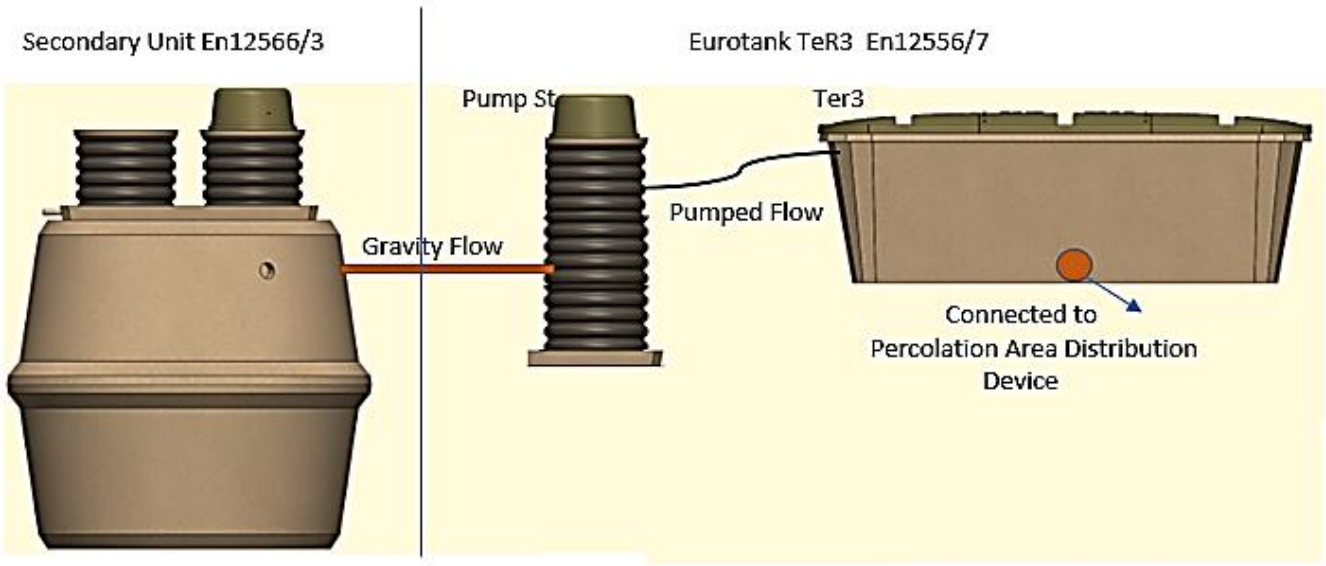
2.0 Description /System Components

Description:

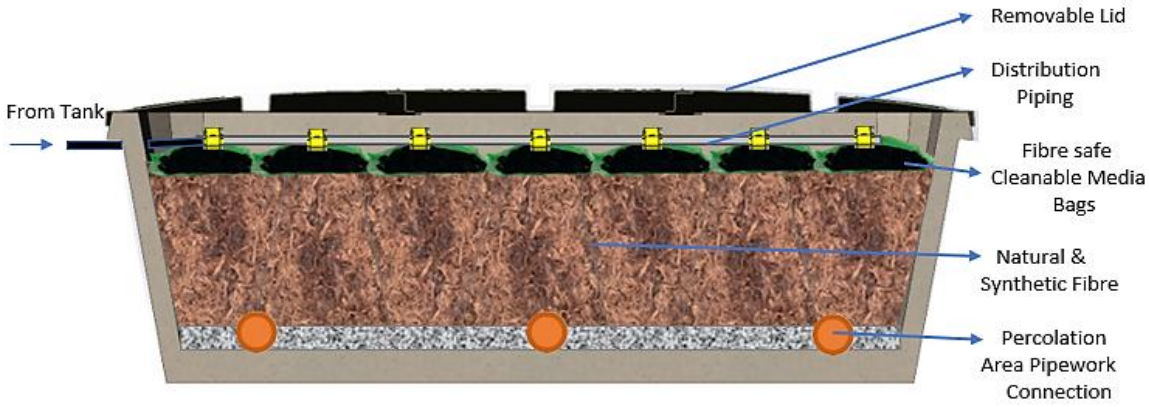
Eurotank TER3, is a CONCRETE Packaged Tertiary Treatment System which further treats effluent from a secondary treatment system example Eurotank BAF. It is an allowed form of Tertiary Treatment, *under Option section 10.2 EPA Code of Practice* ideal for most sites including difficult sites, with high vulnerability, Nutrient or Biological sensitive area`s and especially suited to small sites due to its small footprint.

Raw sewage enters the secondary unit by gravity from the house and is treated, effluent then leaves this unit and is pumped via a network of piping over the surface of the TER3 , it then trickles down through the various layers receiving Biological Tertiary treatment and further protection before final discharge to the ground. The unit is connected to a network of perforated Pipes via distribution device over an infiltration area for ground disposal.

2.1 Typical System Layout

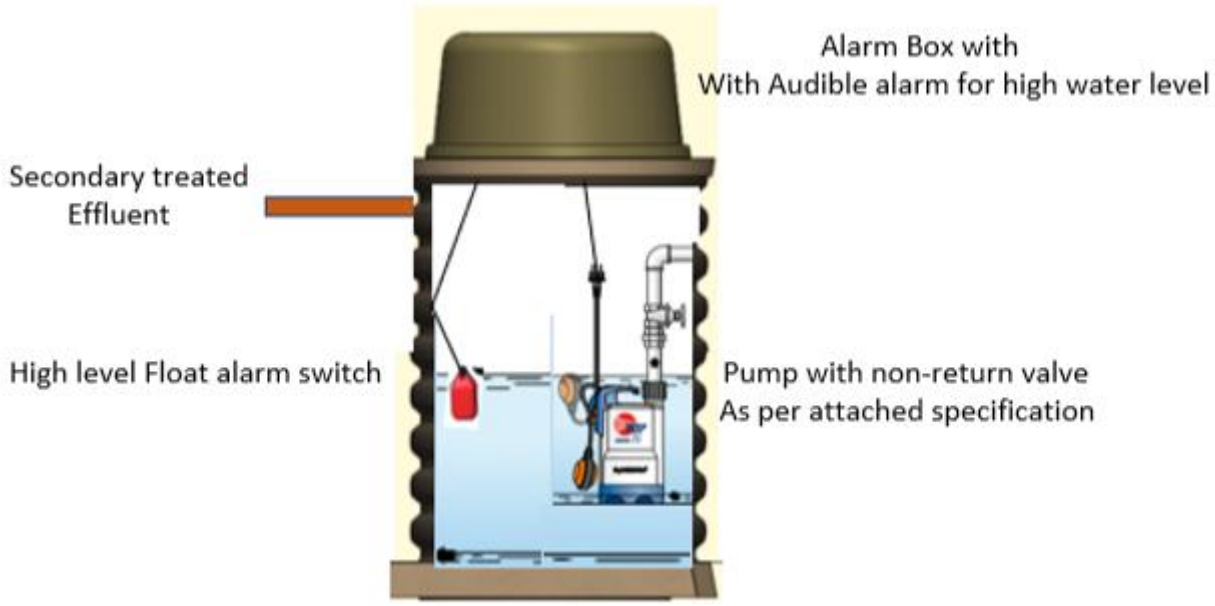


2.2 TER3 System Components



2.3 Pump System

The outlet of the secondary unit will be gravity displacement for domestic system. This is connected by gravity pipe to a pump station. Alternatively the integrated pump system of the secondary may be used if designed to be compatible with the pump cycles and alarm system required by the Ter3 unit please contact Tpw systems for more info.



3.0 Health and Safety

When installing and maintaining a wastewater treatment plant it is of vital importance to ensure that a high level of health and safety is always adhered. It is crucial that the following instructions are read and understood prior to installation by everyone involved in the installation of the unit.

- Every time you are conducting work or inspections on the unit follow all the information provided in this manual and any other applicable health and safety guidelines that apply.
- The personnel responsible for the installation of the unit must hold the appropriate Qualifications for their work and follow the guidelines supplied with the equipment.
- All electrical work must be carried out by a suitably qualified, experienced and insured person.
- Take note at all times of the presence of water when installing the unit and when completing electrical work. Appropriate Personal Protective Equipment (PPE) must be in good condition, fit for purpose and worn at all times. E.g. safety footwear, high visibility vests, overalls, face visors and gloves. This will prevent contact of harmful micro-organisms contained in the sewage and sewage effluent.
- After working on the installation or maintenance of the unit remove potentially contaminated clothes, wash hands thoroughly and wash hands prior to eating or drinking, etc.
- Never enter a tank unless you hold the appropriate "Confined Space" training.
- Work such as de-sludging and carrying out maintenance is potentially dangerous therefore, should never be done alone.
- Use appropriate lifting equipment when required.
- Covers should not be left off or unattended and all covers should be locked or in a fenced off area.

SUMMARY: If you are not qualified, experienced or insured– do not work on the unit.
Installation Service available on request.

4.0 Installation

4.1 General

The Eurotank Ter3 Unit is installed at the percolation infiltration area and connected to a distribution device ie – Distribution Box. The unit can sit at ground level or subsurface – max depth 700mm. To ensure top lid cover is over ground level (to prevent water ingress). In all cases the location depth and specification of the percolation/infiltration area should be designed by Suitable qualified professional in accordance with *Epa Code of Practice 2021.*

4.2 Transportation

Unit should be securely tied on a level base and free from any debris to prevent any movement, destruction or potential injury occurring during delivery. When lifting the unit it is important to ensure that the unit is level and is lifted by crane or other appropriate certified for use lifting equipment. All lifting should be completed by an experienced operator.

4.3 Initial Inspection

Prior to installation all units should have a visual inspection completed by the purchaser. The units should be checked for any damages such as cracks or defects. If any damage is present on the unit, please contact your supplier immediately and do not install the unit as once the tank is delivered and accepted any claims for damages will be classified as void.

4.4 Siting

The required minimum distances for installation of a septic tank or wwts from such items as dwellings, boundaries and watercourses in Ireland must be in compliance with the local authority of the specific area or the Environmental Protection Agencies (EPA) manual titled "EPA Code of Practice Wastewater Treatment and Disposal Systems Serving Single Houses". The typical minimum distances for the tank and percolation area in Ireland are outlined below. These are only guidelines – and advice should be obtained from your engineer when positioning the system. *NB Location and depth of the unit should be determined by Suitably Qualified Professional.*

Epa Code Of Practice, 2021 Wastewater Treatment and Disposal Systems Serving Single Houses (p.e <10)

Table 6.2: Minimum separation distances from the entire DWWTS

Features			DWWTS – periphery of tank/plant and infiltration/ treatment area (m)
Public/group water supply abstraction points/wells			60
Down-gradient domestic well	3 ≤ PV ≤ 10 (usually SAND- or GRAVEL-dominated material)	Depth of soil/subsoil > 2.0 m between invert level and bedrock, and water table 1.2–2.0 m	60
		Depth of soil/subsoil 2.0–8.0 m between invert level and bedrock, and water table > 2.0 m	40
		Depth of soil/subsoil > 8.0 m between invert level and bedrock, and water table > 2.0 m	30
	10 < PV ≤ 30 (usually SILT- or SAND- or silty GRAVEL-dominated material)	Depth of soil/subsoil 1.2–8.0 m between invert level and bedrock	45
		Depth of soil/subsoil > 8.0 m between invert level and bedrock	30
	30 < PV ≤ 120 (usually SILT/ CLAY- or CLAY-dominated material)	Depth of soil/subsoil 1.2–3.0 m between invert level and bedrock	40
		Depth of soil/subsoil ≥ 3.0 m between invert level and bedrock	30
Alongside domestic well			25
Up-gradient domestic well			15

Features	DWWTS – periphery of tank/plant and infiltration/ treatment area (m)
Karst feature	15
Lake or foreshore	50
Watercourse/stream	10
Open drain or drainage ditch	10
Adjacent tank/plant and percolation area, polishing filter or infiltration area	10
On-site dwelling house	7 (tank/plant)
	10 (free water surface constructed wetland)
	10 (infiltration/ treatment area)
Neighbouring dwelling house	7 (tank/plant)
	25 (free water surface constructed wetland)
	10 (infiltration/ treatment area)
Surface water soakaway[a]	5
Road	4
Slope break/cuts	4
Trees[b]	3
Site boundary	3
Heritage features, NHA/SAC/SPA[c]	See note

PV, percolation value.

[a] The soakaway for surface water drainage should be located down-gradient of the infiltration/treatment area; it should also be ensured that this distance is maintained from neighbouring storm water disposal areas or soakaways.

[b] Tree roots may lead to PFPs developing. The canopy spread indicates potential root coverage.

[c] The distances required depend on the importance of the feature. Therefore, advice should be sought from the local authority and/or from the the Department of Housing, Local Government and Heritage, specifically the National Monuments Service and the National Parks and Wildlife Service.

Other factors that should be taken into account when considering the location of your system include the following:

- During maintenance and washing down of grease preventative bags an odour may occur from the unit, as a result of this the direction of the prevailing wind should be assessed.
- The unit should be installed in a location where it will not be subject to any superimposed loads..
- Provide sufficient access for the delivery lorry during installation and provide adequate access for excavator and for general maintenance.
- The water table and groundwater conditions must also be analysed as site water can damage the system. If the tank is subjected forces of water during installation it may result in floatation occurring, which will lead to difficulties and an inadequately installed tank. It is critical that sufficient drainage is provided to permanently discharge any groundwater.

4.5 Excavation

The excavation should be conducted in accordance with the appropriate Health and Safety requirements. Excavation for the system should allow a clearance of 300mm between the unit and the sides of the excavation.

NOTE: These installations notes are guidelines only. The specific installation methodology depends specifically on the ground type, soil type, position of system, depth of installation, water table level, bedrock level, etc. It is mandatory that your indemnified engineer approves the installation plan prior to commencement of any work.

4.6 Dry Normal Ground Conditions

Sites are classified as "dry" when at all times water lies below the base of the unit and drains naturally.

4.7 Abnormal or Wet Ground Conditions

Sites are abnormal if groundwater is expected to reach top level of the installed tank at anytime, if the excavation contains sharp rock or an uneven base.

4.8 General Installation Procedure

For installations deemed to be dry as per 4.6.

NB – TER3 unit should never be installed in areas of high water table.

- The area needs to clear of all vegetation ensuring good soil/ material under the base
- If the unit is to be subsurface (max base 700mm below surface) material used to backfill should be loose stone free and impermeable.
- If the unit is with base at ground level suitable material can be used to slope the sides for landscaping
- The unit should be PERFECTLY LEVEL in all directions

4.9 Wet Ground Conditions, Deep installations

As the unit receives pumped effluent and has gravity outlet is designed to be or should never need to be in wet conditions or deep installation

4.10 Lids

The lid Cover should be installed above ground level to prevent water ingress. The standard lid is not suitable for pedestrian/lawnmowers etc and displays a " no step" warning.

4.11 Electrical Power Installation

All electrical work must be carried out by competent personnel capable of completing the electrical installation using suitable material and complying with current regulations. It should be ensured that the electrical wiring and all other electrical system parts are in good working order. Under no circumstances is the system to be started if damage is present. Warning tapes should be placed on the cable and additional warning tape should be at a depth of 150mm. It is not feasible to state a specific electrical installation method due to variance of site conditions and distance. In general terms the cable protection is by a suitable RCD to the standard of BS 4293 and a MCB to BS 3871. The RCD should a minimum of 16 amp, rated 230V, 30mA. 2.5mm² 3 core SWA is appropriate for runs less than 100m and loads up to 0.75 kW. While 4mm² 3 core SWA is adequate for runs less than 100m and loads up to 1.55kW. The Eurotank system requires a 3 core SWA cable to be run from the fuse board to the control panel which is located on the tank. The cable between the tank and the control panel should be run in a duct where deemed necessary. This work must be done by a suitably qualified electrician.

4.12 Post Installation Checks

After installation the following checks must be conducted

- All plant (electrical pumps) are connected correctly.
- The height of the extraction points is correct.
- Ensure during the connection work that all cables and hoses are long enough for the units to be removed from the tank without any problems.
- The lid is installed correctly.

5.0 Warranty

All goods, within a twelve month period from delivery of system to site, that have been judged to be flawed and under normal circumstances have failed to perform their operation successfully will be repaired or replaced by Eurotank without charge. If applicable, this clause of Eurotank warranty is restricted to repair or replacement of the goods but doesn't include costs such as installation, transportation or similar affiliated costs on site.

This warranty is based upon the following conditions:

1 Eurotank being granted the opportunity to examine the goods to analyse that the goods are actually flawed.
2 The goods have been used strictly in accordance with the instructions supplied by TPW Systems /Eurotank and this manual
3 Any claim being sought by the buyer must be alerted to TPW Systems/Eurotank within seven days of detection.

6.0 Maintenance

The maintenance of the sewage treatment system is crucial, as it will ensure that the system operates efficiently. Failure to provide maintenance to the system will result in damage that will cause increased costs for replacement goods and maintenance in the long term. Failure to have annual maintenance completed will void any warranty.

There are some basic checks that the owner should be able to carry out that will avoid the need for call out of a service engineer. Below are some self-help checks that may be helpful:

Note: All maintenance should be done in conjunction with appropriate Health and Safety guidelines.

- Check the access lid is correctly and completely connected at all times.
- Avoid large quantities of the following to enter the system: oils, disinfectants, bleaches, milk, food, nappies and baby wipes.
- Failure of the outlet Effluent pump will be signalled by an Audible alarm built into the control unit.
- Obstructions can occur at the inlet and outlet. These obstructions can usually be removed by rodding.
- Ensure the electrical supply is operating correctly by a visual inspection. Contact an appropriate and competent person to repair the electrical works. Do not attempt to repair the electrical faults yourself.
- Check the level of sludge in the secondary unit. If the unit is required to be de-sludged, it is the responsibility of the owner to arrange for the tank to be de-sludged.
- Check all pumps and pipework are not blocked.
- Visually inspect for any surface water entering the unit.

6.1 Maintenance Schedule

The following maintenance schedule should be adhered throughout the year:

Weekly check:

- At the sample point location, check if the treated wastewater is discharging correctly from the secondary treatment unit.
- Keep alert for any leaks or odours.
- Listen for audible alarm

Six month check:

- Walk the entire system and inspect for any odours, leaks, lodged surface water and any discrepancies.
- Inspect the pumps for any obstructions or blockages. If any obstructions or blockages are present it is important to replace or repair, depending on the circumstance.
- Visual check for mechanical damage.
- Vents are clear from any blockages or obstructions.
- Ensure lids are secure.

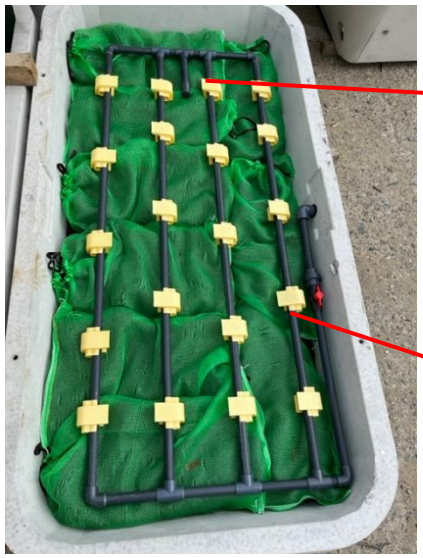
Annual Service:
Eurotank recommends that all systems are serviced annually by ourselves or a suitably qualified service engineer. This will ensure that the system is operating efficiently and will provide maximum benefit for your system in the long term. The annual service should include:

- A thorough inspection on all plant.
- The removal of any scum or grease located on the sides of the unit.
- All lids are fitted securely.
- Manual activation of all pumps.
- Sludge Levels
- Determine if the unit needs to be de-sludged, and if not approximately when it will be required to be de-sludged.
- Clean Fibre safe System
- Check that the inlet and outlet of the unit are functioning correctly.
- Inspect all pipework and hoses to ensure no blockages or obstructions are present.
- The results and the work performed must be recorded in a maintenance report. The maintenance
- report must be presented to the relevant authorities upon request.

6.3 Main Maintenance points

6.3.1 Flush Pipework

1. Turn off pump and fill system with water – turn on a tap indoors
2. Remove outlet flush plug
3. Turn on the pump until all solids leave and water runs clear
4. Replace the plug
5. Check all orifices and clear if blocked



Flush Plug

Uncoupler

6.3.2 Cleaning Fibre Safe Bags

1. Remove pipework by uncoupling as above
2. Remove media bags
3. Clean by hosing down solids or dirt over the primary access opening of the secondary unit

6.3.3 inspection of media

The Natural Media (CocoNut Husk) has a very long lifespan 10yrs+ but should be inspected annually for signs of degradation due to prohibited substance – listed below.
Please contact Tpw Eurotank for fibre replacement service. www.Tpw.ie

6.4 The Do's and Dont's for Unit Owners

6.4.1 The Do's

- Conduct weekly inspections
- Have a service engineer or Tpw Systems Ltd conduct a full service on the system once per year.
- Use liquid detergents when washing clothes and dishwashers.
- If possible wash your clothes throughout the week rather than all in one day.
- Prior to placing any item down the toilet or sink consider if this will affect your system.
- Contact Tpw Systems for any questions or concerns you may have.

6.4.2 The Dont's

- Place any medicines, baby wipes, incontinence pads, poisons, weedkillers/pesticides, tampons, mouth wash, nappies. condoms or similar items down the toilet.
- Place any cooking oil, grease, fat or similar items down the sink.
- Use a waste disposal unit as the system may not be large enough to facilitate the waste.
- Wash all your clothes in one day.
- Direct leachate from a condensing boiler into the system.

- Direct effluent from a water softener into the system.
- Allow any surface water to enter the system.

This list is not exhaustive. No responsibility is taken for any system malfunction where any item or substance not classified by Eurotank as normal sewage enters the system. If in doubt – contact us. Any items that do not break down quickly such as baby wipes or hair can have a serious impact on the operation of the system.

6.5 Maintenance Service

TPW SYSTEMS LTD offers a nationwide service on wide range of maintenance aspects for all parts of the customer's treatment system .Please contact us to discuss with a member of our team a service inspection that will be of benefit to you and to obtain contact details for your closest agent.

The servicing contracts offered by Tpw Sytems /Eurotank typically include the following items:

- Validation that all equipment is operating correctly.
- Validation that blowers and pumps are operating correctly.
- Test on ventilation.
- Visual inspection of the unit and surrounding area.
- Replacement of systems components if required.
- Sludge measurement.
- Cleaning replacement of filters