

Installation Instructions - 3000 Lt Underground Septic Tank

1. Handling

- Move the tank by lifting, using the lifting lugs in the top
- Do not drop the tank.
- Do not roll it into the hole
- Do not drag tank across rough surfaces

2. Site Selection

- Must conform to local & statutory regulations
- Where no regulations exist, the distance of the excavation from any structure must be equal to or greater than twice the depth of the excavation.
- Must be located so that tree roots will not interfere with the tank or its associated fittings & plumbing.
- Must not be installed where there is a possibility of the water table would exceed up to half height of the tank.
- Must not be installed where actual or potential garden beds exist.
- Must not be installed where it will be subject to surcharge loading within 2m of the perimeter of the tank. This includes driveways, storage areas, anywhere stacked materials are placed, above ground pools & spas, high level residential footings, and anywhere that it is likely that people may congregate
- Placement of the tank is permitted adjacent to footings of residential dwellings so long as the designer of such footings maintains vertical support to these footings below the zone of influence of the tank as per local council requirements
- Note that the tank in this form does not have the ability to withstand significant surcharge loads placed above the tank (and within the zone of influence) such as stacked soil/materials and multiple human access.

3. Excavation

- Observe any local and statutory requirements for excavations (e.g. benching/battering/shoring)
- Hole must be 2100mm deep (measured from the finished ground level, not necessarily the existing ground level).
- The installer shall take all reasonable precautions to ensure that the tank is not within the zone of influence of nearby existing structures, such as retaining walls, residential dwellings, commercial buildings, and the like. In such circumstances, advice from a suitably qualified structural engineer should be obtained.
- At the top, the hole is a minimum of 7500 mm long for sand gravel soil and 5400mm min for clays.
- The base of the hole must be 1200mm minimum in diameter.
- The Slope 1.5:1 in sand and Gravels soil and 1:1 in clays soils.

4. Placement of Tank

- Place the tank on a level bed of 100mm sand bedding layer. This is to ensure that rocks & other debris in the excavation do not damage the tank.
- Ensure that the top of the tank is sitting at finished ground level.
- Fit the lid ring to the tank:
- Ensure that the rim around the opening is clean and dry.
- Apply a 20mm bead of silicone to the groove in the rim around the opening.
- Place the lid ring in position with the bolt holes aligned with the threaded brass inserts.
- Secure the lid with stainless steel teck screws
- Once the back fill reaches half the tank height fill tank with water up to 640mm below finished ground level.

See attached Figure 1. 3000 Litre Septic Tank Installation Guide.

5. Backfilling

- Soil pressures based on a backfill / subgrade material must have a density Maximum of 20kN/m^3 and minimum density of 18kN/m^3
- Backfill material must have a minimum soil friction angle of 30° .
- In addition the backfill around the tank shall be placed in compacted layers no greater than 200 mm evenly around the tank.
- Backfill material is to be compacted evenly around the perimeter of the tank to a 98% modified dry density $\pm 2\%$ from optimum moisture content.
- Place fill slowly and evenly from both sides, and ensure that there are no voids, particularly underneath the hold down wings.
- Only hand held vibrating plate compactors may be used in the compaction process.
- Backfill cover over tank must be 400mm (300mm of backfill material and 100mm of topsoil is acceptable)
- Recommended backfill or foundation material is 10mm Blue metal or 10mm recycled concrete
- Ensure all caps and overflows are sealed prior to backfilling the excavation.
- Excessive dirt in the tank will cause line blockages and possible early pump failure.
- Connection pipes and couplings should be supported over the whole length of the trench.

6. Tank Assembly

- A certified plumber needs to connect the inlet and outlet pipes into the inlet and outlet as marked on the tank.
- The connection needs to be fitted as per local Governments requirements.

7. General

- **The stored liquid is to have a specific gravity of 1.0 only.**
 - **The surcharge loading from a 100 kg person traversing across the lid of the tank**
- We strongly recommend that the tank be kept at least 20% full of water in wet weather, or at any other time when the area around the tank may become waterlogged.**

Care must be taken when pumping out the Septic Tank to ensure that the tank does not float. Please fill tank to ensure that it does not float.

8. Confined Space

- **Under Work Health and Safety Regulations those installing, operating and maintaining this Septic are obliged to follow "Confined Space" requirements.**
- **There should be NO need to enter the tank for installation, operation or maintenance purposes.**

9. Safety

- **At no time should this tank be left in the ground unattended without the lid secured.**

Please see both local and state requirements for installations and worksafe requirements

