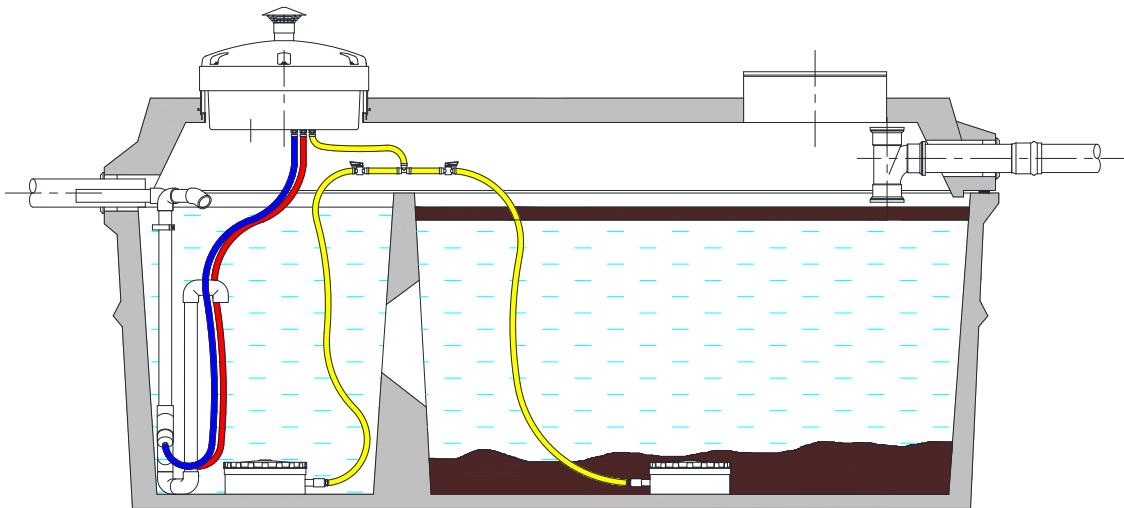


Installers Guidelines

Turley Klärmax Ideal Domestic Waste Water Treatment Plant

EN 12566-3, Annex B



Please read this manual before installing and putting the sewage treatment plant into operation.

WWTP CONCRETE TANK – INSTALLATION GUIDELINES

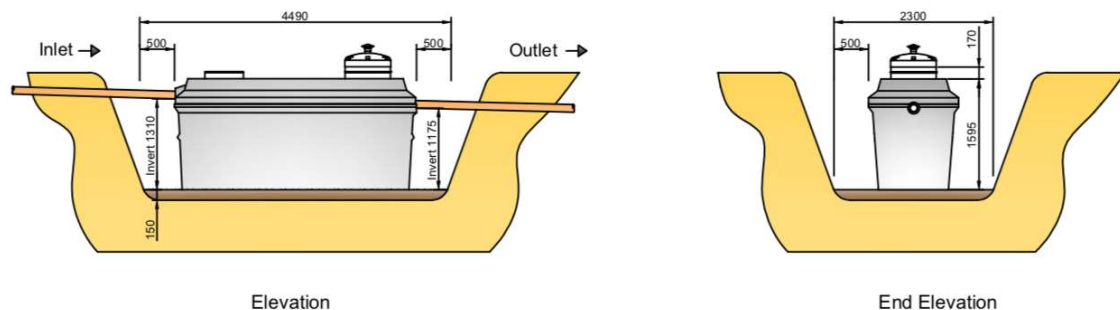
Proper installation of waste water treatment tank is absolutely critical for it to function properly and remain watertight. Many of the problems experienced with tank operation, or of tanks leaking (either water flow into or out of the tank), or of premature system failure can be attributed to incorrect procedures during installation. Improper installation practices can seriously damage the tank or other system components, can reduce the capacity or efficiency of the tank, and can even cause serious personal injury. This INSTALLATION GUIDELINE is offered to assist the installer with advance planning, proper site preparation, safe handling and sound installation procedures.

SITE CONDITIONS PLAN YOUR PROJECT

You will need to know the measurement from the underside of the tank to the bottom of the tank's inlet opening in order to prepare the sub-bed elevation to allow the tank to properly receive the sewer pipe coming from the building. Review our most current literature and drawings, or call us for these critical dimensions. Keep in mind that the site where the tank is to go must be accessible by large and heavily loaded trucks. This site must allow for reasonable access under the trucks own power (not be towed or pushed); it must be clear of trees and branches, overhead wires, underground utilities or other structures that could be damaged by or interfere with the delivery and off loading of the septic tank. Typically, the delivery truck must be able to safely get to within 1 meter of the excavation in order to unload and set the tank. The purchaser is responsible for any damage to the site, the delivery truck or the tank once the truck leaves the public thoroughfare and enters the work site. Therefore, adequate access for delivery equipment to get to the excavation and unload the tank is important. Standard concrete septic tanks are not designed to be installed under traffic loads or to carry unusual heavy construction or maintenance equipment.

EXCAVATION

For the safety of your excavator operator, and the public, all buried utilities should be identified and located before you dig.



Lay out your hole at least 500mm larger than the tank, to allow space to properly compact the fill material. More space is recommended for worker safety; nevertheless, it is recommended that no

worker should be in the excavation until the tank has been set. Excavations should be sloped for stability and worker safety.

Proper bedding is important to ensure a long service life of an onsite septic system, and to allow the tank to be set level. A sand or pea gravel layer, a minimum of 125-150mm thick, overlying a firm and uniform base is recommended. Correct compaction of the underlying soil and sand/gravel bed is critical to insure the tank is set level and stays that way. Tanks must not bear on large stones, boulders, or rock edges.

TANK PLACEMENT

Upon delivery, inspect the tank while it is on the truck; check for any defects or shipping damage, and note that it is the tank ordered. If there are any discrepancies, point them out to the driver, and clearly note them on both the driver's delivery documents. Prior to placement, the tank's orientation should be confirmed (inlet is installed in the lid only while the outlet is located half in base of lid and half in tank top flange).

1. Note: All persons should be kept clear of loads about to be lifted and of suspended loads.
2. Lift the tank using a four leg chain (2 mtr long legs) securely connected to each of the four lifting loops on the side of tank (not the ones on top of the lid), ensuring they are properly located in position as per photo below and place the tank carefully into excavation, checking that the tank is level, and that the inlet elevation will closely match the bottom (invert) of the pipe coming from the house at the point where it will enter the tank. Be sure that the pitch of the sewer pipe from the house to the tank meets the local Code requirements.
3. Manhole lids, risers, and vent pipe, etc. must also be properly sealed. Recheck tank for joint alignment and grade before backfilling. Our tanks are supplied with flexible pipe fittings to assure watertight connections between tank and pipes. With time, pipes may settle, and this changed angle of pipe entry/exit will begin to leak unless it is fitted with a flexible joint connector.



Position of lifting chains

BACKFILLING

Care should be taken when back filling, to prevent damage or misalignment to the entry and exit piping, the tank and fittings, or any joints. Backfill should be placed in uniform, mechanically compacted layers less than 500mm thick. Do not backfill and compact one or two sides before backfilling the other sides. Excavated material may be reused for this purpose, but may not contain any large stones. Concrete tank walls are significantly heavier than fiberglass or high density polyethylene tanks, and are least likely to float in a flooded excavation. However, even empty concrete tanks could float if the water level rises high enough. Therefore, to prevent this from happening after the tank is set, keep water pumped out of the excavation until backfilling is completed, or fill the tank with water, or place soil on top of the tank.