

SYNERGY
WASTEWATER TREATMENT PRODUCTS

Installation Procedure for GRP Cylindrical Horizontal & Vertical Underground Tanks.

Note

Please read, and fully understand these instructions before commencing the installation. These instructions are intended as a guide and do not allow for non standard site specific related issues which may arise. Failure to adhere to these instructions may compromise the structural / operational integrity of the product. These instructions are intended to assist alongside good Building Practices. All installations should be carried out with the upmost regard for the Health and Safety of the installation personnel.

Delivery

The Client or his appointed agent is responsible for the off loading of the delivery vehicle.

- OFF LOAD THE PRODUCT USING SUITABLE MECHANICAL EQUIPMENT OPERATED BY SUITABLY TRAINED PERSONELL.
- ONLY LIFT THE PRODUCT USING CERTIFIED WEBBING STROPS.
- DO NOT WRAP CHAINS AROUND THE PRODUCT
- DO NOT DROP OR SUBJECT THE PRODUCT TO ANY SHARP IMPACT
- STORE THE TANK ON A LEVEL SURFACE AND STABALISE BY THE USE OF CHOCKS OR SIMILAR.
- ENSURE THE ITEMS RECEIVED COMPLY WITH THE DELIVERY NOTES.

Excavate to the tank dimensions allowing 225 mm minimum to all sides, and 300 mm to the base. The excavation should be carried out in accordance with BS 8000-1: 1989 Workmanship on building sites. The excavation should be free of *any* objects or materials which may puncture or damage the tank in any way.

In wet ground conditions it is important that the excavation is kept dry throughout the installation and until the concrete has cured (usually seven days). The use of dewatering pumps, and pump sumps is recommended in the case of high water table situations.

Pour the concrete to a level of 300mm. allow for an initial set.

Lower the tank into position and puddle into the wet concrete, ensuring there is no voidage. Ensure that the orientation is of the connections is correct before proceeding any further.

Stabilise the tank in the excavation by partially filling with water. Place temporary covers over openings. Avoid debris entering the tank.

Commencement of Backfill.

DO NOT DISCHARGE CONCRETE DIRECTLY ON TO THE TANK BODY.

Commence the concrete back fill at a maximum of 500mm lifts, allowing initial set before each concrete pour. Ensure that the concrete is evenly distributed around the tank at all times. Ballast the tank with water at the same rate/level as the concrete back fill. On multiple chamber tanks ensure that the ballast water level is equal in each chamber. (Do not stabilise the tank by using the bucket of the excavator or similar) Do not distort tank by the use of super imposed loads.

Ensure that the concrete is worked around the tank eliminating all voids. Do not use vibrating poker. Do not over compact. Over compaction may result in the distortion of the tank structure. Continue the backfill process up to the level of the connections.

Connect and seal pipe work connections.

Tanks supplied with loose turrets. The turret(s) should be fitted into position and a waterproof seal made between the mating surfaces using a proprietary mastic/sealant (Not of Synergy supply). **It is the responsibility of the installer to ensure a waterproof seal.**

Continue with the concrete backfill to a minimum of 230mm above the tank.

Back fill to ground level using a granular free flowing material (not sand). Position Manhole Covers and Frames.

Note.

In high water table areas it may be necessary to provide a weighting slab to prevent flotation.

If installed in a trafficked area, or other superimposed loadings will be applied above the tank installation, a suitably designed concrete slab should be constructed. This **must** be designed by a qualified civil engineer or similar. Synergy Wastewater Treatment Products are not qualified to offer advice on the design of such a structure.

Concrete Specification.

The concrete mix specification may be taken from BS 5328: Part 1:1991 (inc. amendments). Take into account the site conditions and application requirements. For a typical non-structural application in non-aggressive soils a standard mix of ST4 with a 50mm slump is generally suitable, but also permits the equivalent Designated Mix GEN3 to be specified as an alternative. If for non typical applications, structural or other site specific reasons a higher designation is required then the installer may use table 6 in BS 5328 : Part 2:1991(amendment 8759/October 1995) for guidance.

This installation procedure is for guidance only, and should not be regarded as absolute under **any** circumstances. If there are any matters which you are unclear on, or do not agree with, then it is the responsibility of the installer to seek further clarification and advice.

E&OE