

Molloy Precast Products Ltd. Waste Water Division

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Tank Installation instructions

This documents contains instructions for preparatory work as well as general installation guidelines to be followed by customers.

- Ensure that all aspects of installation are coordinated so as to minimize delays and prevent additional transport and/or crane costs.
- The tank must be installed using lifting equipment provided Molloy Precast Ltd. The use of any other equipment will be entirely at the customer's risk.
- All lifting machinery should be certified and adequate for the loads likely to be encountered during the whole lifting operation.

The customer is responsible for the following:

- Excavation work.
- Provide a suitable base in the excavated hole.
- Provide a sufficient quantity of fresh mortar to bond the lid and tank together.
- Install and connect pipes from drain to input and from tank to final drain.
- Back filling of excavation.
- Supply and maintain safe site and working conditions.

Excavation

Unless otherwise agreed beforehand, the **standard excavation requirements** for installation of the tank are as follows:

- To enable safe delivery of the Tank access to the excavation hole must be clear and over firm ground.
- Ensure that the excavated area corresponds with the site pipe work and the tank inlet and outlet orientation.
- The location of the excavation should be in accordance with the planning permission granted.

Excavation Details

- A hole needs to be excavated to a depth approximately 200mm more than the total height of the system (tank, lid and manhole) to allow for the construction of a suitable base.
- Note: Ensure that the inlet of the Tank will accurately correspond to the existing or proposed drain pipes.
- The hole should extend approximately 500mm beyond all sides of the system to allow easy installation and suitable backfill.
- Vehicles should not be permitted within a distance equal to the depth of excavation, unless suitable structural protection is provided to the hole.
- All water and large stones must be removed from the excavation before installation of the tank.

Suitable base

- Depending on site and soil conditions a base of level compacted sand or hard core will normally be sufficient but in poor or wet conditions where subsidence is likely to occur consider a concrete base.
- The Tanks may be bedded on a level floor of concrete 100 to 150 mm deep.
- The concrete must be of sufficient thickness (minimum 150mm) and grade 25N. This ensures that the tank is adequately supported with due regard to sub-soil conditions and the weight of the tank when full. (Care must be taken to eliminate voids).
- The concrete should be sufficiently set at the time of delivery. The hardened concrete should be covered with a layer of fine sand, 25-50mm thick, to insure level seating for the tank and that no pressure points occur.
- At the time of delivery the hole must be empty of water. If side collapse occurs because of water ingress or poor soil stability, suitable shoring of the excavated walls may be necessary.
- All safety requirements for deep excavations should be adhered to.
- For safety reasons manholes should be secured in place on the lids immediately after the lids are placed in position. The manholes must be left in the closed position.

Pipe connections:

- The customer provides the piping and connections to the inlet and outlet of the system. Good ground working practice must be followed particularly with regard to the gradient on drainage pipe runs.

Backfilling:

- Once the tank is placed in position and the necessary connections are completed, backfill around the tank must be carefully consolidated with all large stones/boulders removed to ensure even transfer of ground loads and to prevent localised stress concentrations. Seal the lid with an even bed of mortar as in photo.
- The System does not require to be ballasted with water while backfilling, except in case of exceptionally high level of ground water.
- **Note:** Concrete tanks will float! If the water table is likely to rise 1m above the base of the tank take all necessary precautions to insure that the tank is anchored by part filling with water during installation and using anchoring lean mix if the tank will be empty on occasion during future use.

