SIMOP
EQUIPMENTS FOR ENVIRONMENT

Give the best back to earth

# INSTALLATION INSTRUCTIONS
# FLAT HORIZONTAL POLYETHYLENE TANK

**PHPEPLA**
**06/24**

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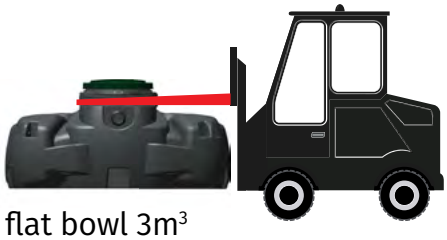
## Before unloading

- Read this document carefully before starting to install your tank.
- The installer will have taken note of all the tank's characteristics (weight, dimensions, use, constraints) on the product data sheet.
- When your tank is delivered and before it is unloaded, please check visually that it has not suffered any damage and that all its components are present. In the event of a defect, please note any reservations on the CMR (consignment note).
- Store the tank in a safe area before final installation.
- Provide access for adapted means of transport (possible access for semi-trailer truck or exceptional convoy).
- The rules of the installer's trade (wearing personal protective equipment, taking precautions when handling tools...) as well as all product-related documents must be scrupulously observed.
- Failure to comply with installation and safety instructions will not incur the manufacturer's liability, and will entail the loss of the equipment warranty.

## Handling

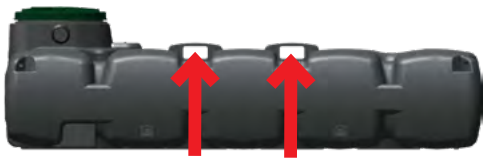
- Handling procedures must comply with current safety regulations.
- Before handling, check that the tank contains no water, otherwise drain it.
- For handling by fork-lift truck with a minimum distance between forks of 86cm.
- For installation, use the flat straps supplied to pass lifting slings through, at an angle of 30° or less to the vertical.
- The$^{3m3}$ tank can be manually operated using the handles.
- Once suspended, the tank must be guided using ropes. Do not walk under the load.
- Slings must be supplied by the installation company.
- Provide access to handling equipment adapted to the final location.
- Do not roll up the bowl with chains or any other means.

### Fork passage



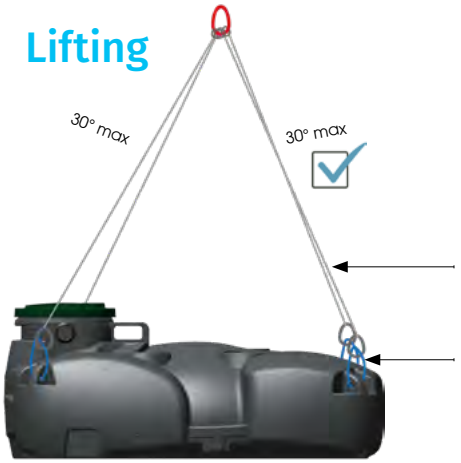
flat bowl 3m$^3$

flat bowl 3m$^3$

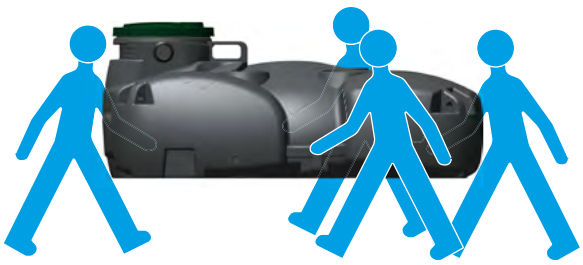


flat bowl 5m$^3$

### Lifting




### Manual handling only 3m$^3$

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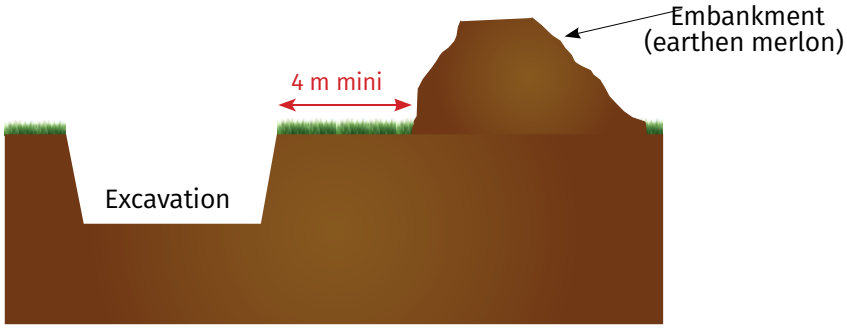
## Earthworks

Create a separate excavation for each tank and, if necessary, draw down the groundwater table until backfilling of the tank is complete.

The walls of the excavation must be at least 0.2 m all around the tank. The excavation must be stabilized and free of water.
The bottom of the embankment slope must be at least 4 m around the tank, otherwise a supporting wall must be built (consult a specialist engineering office for dimensioning)




## Installation site

Respect the layout rules of current standards :
- standard NF P 16-442 for light liquid separators and sludge traps.
- standard NF EN 1825-2 for grease separators.
- NF DTU 64.1 for all-water pits.
- leaflet 70 for storage tanks.
- standard NF P 16-005 for rainwater harvesting tanks.

## Ventilation

Respect the rules in force in order to :
- to avoid depressions,
- to renew the air,
- to evacuate gases.

## General installation information

- Respect the slopes of the tank inlet and outlet pipes, which must be between 1% minimum and 4% maximum.
- There must be no counter-slope on the inlet/outlet tubes.
- In the case of concrete, sandstone or cast-iron pipes, the inlet and outlet tubes must not rest on the unit, but must be supported by the ground.
- The diameters of the tank inlet and outlet must be respected, and the pipes must be at least equal to the latter.
- The altimeter heights of the water lines must be maintained.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## Standard underground tank installation

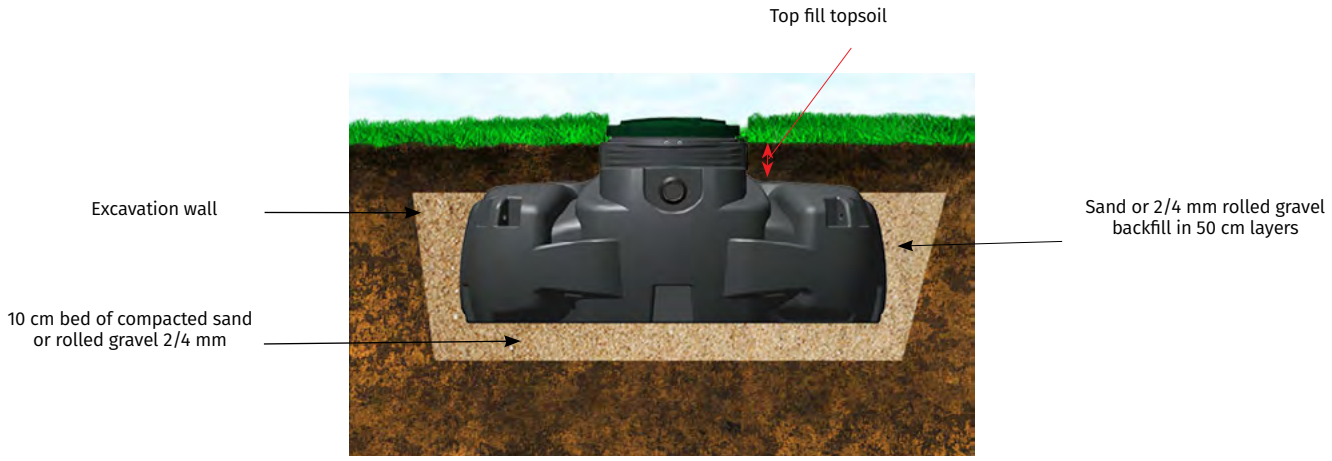
*On stable, non-waterlogged, non-clayey, non-loamy ground*

Make the bed with sand or gravel rolled 2/4 mm on a thickness of 10 cm minimum, perfectly level and compacted.

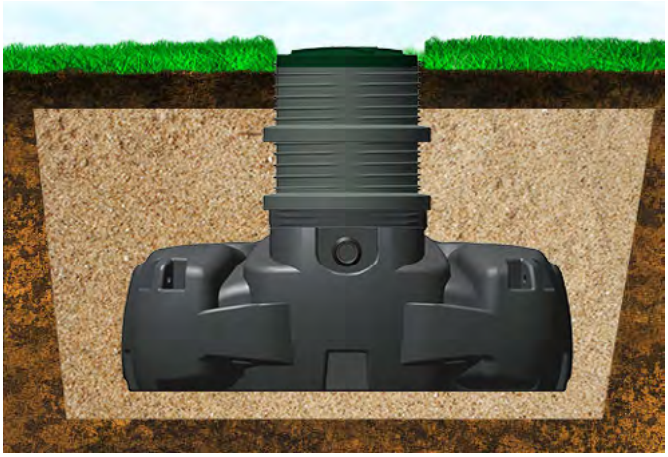
Place the tank and stabilize it. Backfill with sand or rolled gravel 2/4 mm up to the top of the tank.
Proceed in 50 cm increments, using hydraulic compaction. Mechanical compaction is not permitted.

Finish backfilling up to cover level with sand and topsoil (up to a maximum of 20cm of topsoil). Maintain a backfill height of 700mm above the top generatrix (2 risers of 300mm max.)

When backfilling, make sure to leave the lids accessible, so as to have access to the inside of the tanks for maintenance operations.




**Installation with a maximum of two extensions: backfill with sand and topsoil (max. 20cm of topsoil)**

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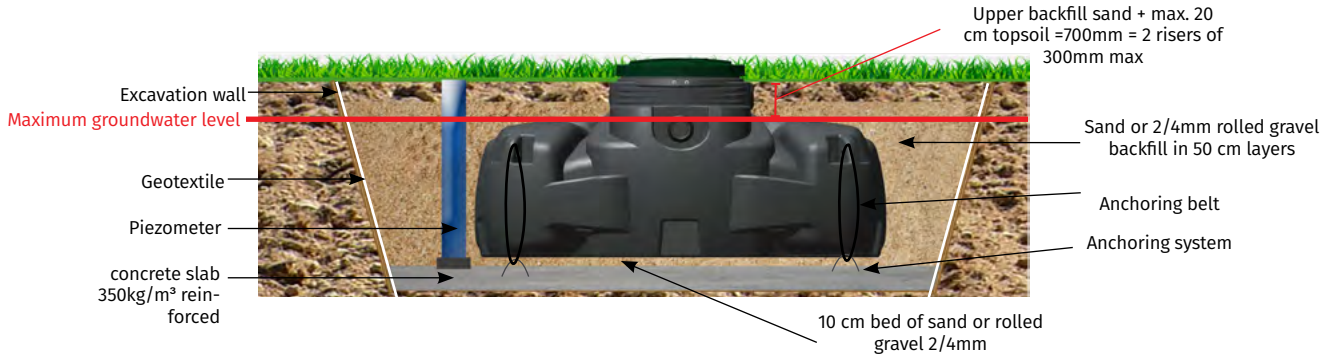
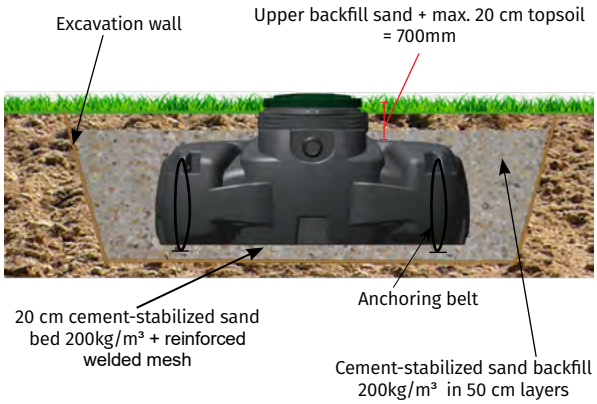
## *In clay soil and/or in the presence of groundwater*

- The level of the groundwater must not exceed the upper generatrix of the tank.
- During construction, keep the water table below the invert level.
- Place a geotextile on the walls of the excavation.
- Create a concrete slab 350kg/m³scrapped with installation of a sufficiently resistant rigid welded mesh..
- Create a steel anchoring system on which the straps can be fastened without excessive tension. It is advisable to determine the characteristics of the concrete slab (dimensions, thickness, reinforcement, etc.) by a design office, in order to meet the constraints for which it is intended.
- Install a piezometer (PVC tube Ø 315 mm protected by a buffer in the upper part and a bed of gravel and geotextile in the lower part) to measure the level of the water table and to allow it to be lowered during emptying operations.
- Lay the bed with 2/4 mm rolled sand or gravel to a minimum thickness of 10 cm, perfectly levelled and compacted.
- Position and secure the tank using the anchoring rings provided.
- Backfill with sand or rolled gravel 2/4 mm up to the top of the tank. Proceed in 50 cm increments, compacting hydraulically. Mechanical compaction is not permitted.
- Finish backfilling up to cover level with sand and topsoil, up to a maximum of 20cm of topsoil. The maximum backfill height is 700mm. Make sure to leave the lid accessible, so as to gain access to the interior of the tank for maintenance operations.




## *On silty and/or unstable ground*

A backfill support structure may be required around the structures. These recommendations can be defined by a specialized engineering firm.
- Lay the bed with 200kg/m³ cement-stabilized sand to a thickness of at least 20 cm, perfectly level and compacted, including reinforced welded mesh and a steel anchoring system to which the straps can be attached without excessive tension.
- Installing and strapping the tank using the anchoring rings provided.
- Backfill with cement-stabilized sand$^{200kg/m3}$ up to the water outlet.
- Finish backfilling up to cover level with sand and topsoil, up to a maximum of 20cm of topsoil. The maximum backfill height is 700mm. Make sure to leave the lid accessible to allow access to the interior of the tank for maintenance operations.





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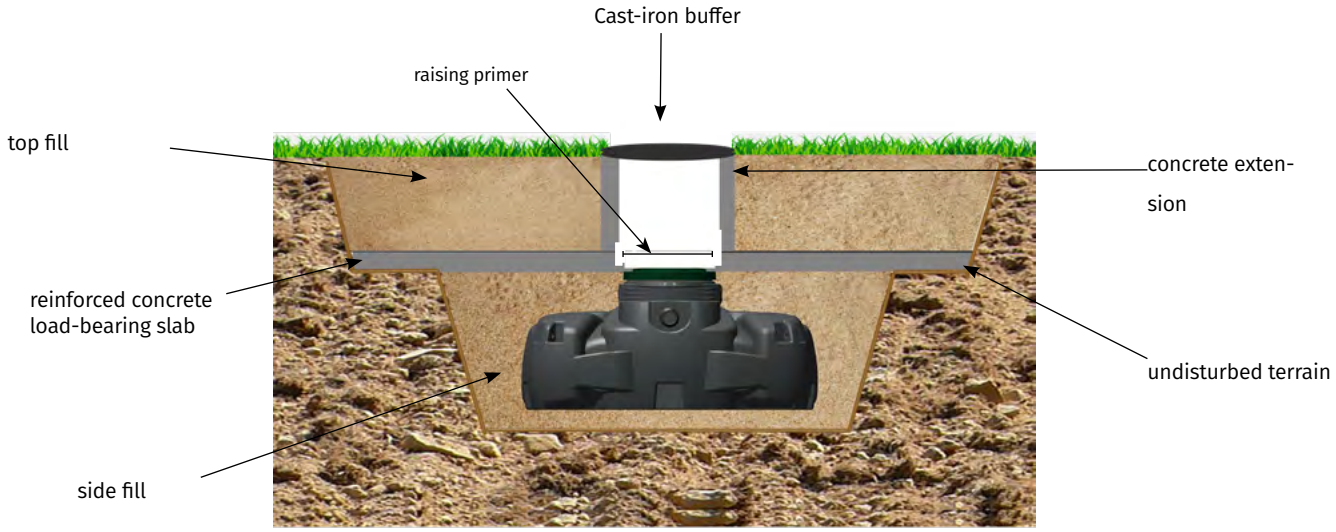
## Reinforced concrete load-bearing top slab (self-supporting)

A reinforced concrete load-bearing slab is required in the following cases:
1) In case of backfill height greater than 700mm above the top generatrix.
2) In the event of overloading due to vehicles passing over the tank (only in the case of PE treatment), or less than 4 metres from the edge of the pit.
3) When using concrete extensions.
4) In the event of overloading due to extreme weather conditions (e.g. snow).

This slab must be supported all around the excavation on the stabilized and/or undisturbed ground.
It should be placed at the level of the sill, but should not be integral with the sill.

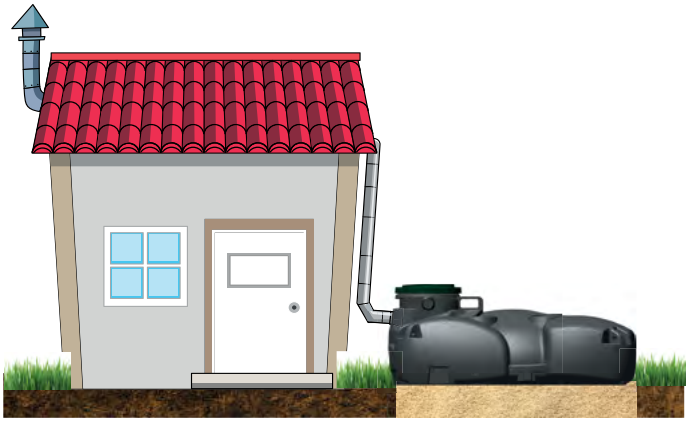
The characteristics of the load-bearing slab (dimensions, thickness, reinforcement, etc.) must be determined by a design office in order to meet the constraints for which it is intended.

Example of installation of a self-supporting slab on stable, non-clay, non-silty ground:




## Above-ground installation

Prepare a 10 cm sand bed on a flat, horizontal, stable surface.

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## Twinning

2 or more tanks can be joined from below, using the slots (2 per tank) provided. Drill a hole with a hole saw (not supplied) and connect the tanks using a KITJUM50. The minimum distance between each tank must be 300mm to ensure correct backfilling.

For installation conditions, please refer to the previous information.

Twinning location


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