

## Max Rain installation requirements

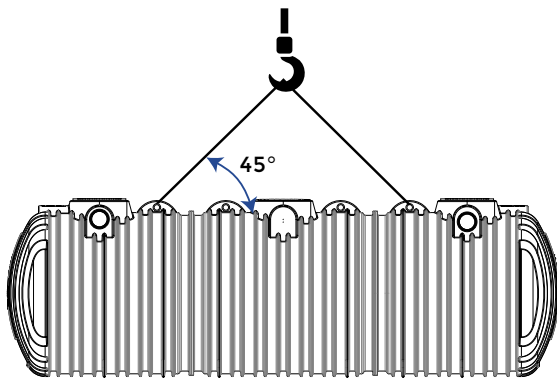


warnings

- A. Underground tanks must not be installed above ground.
- B. The tanks must not be used to store industrial waste or liquids containing chemicals or mixtures incompatible with polyethylene.
- C. Underground tanks are not suitable and must not be used to store diesel fuel.
- D. Tanks are not suitable for housing industrial pumping installations underground (e.g. wastewater pumping wells).

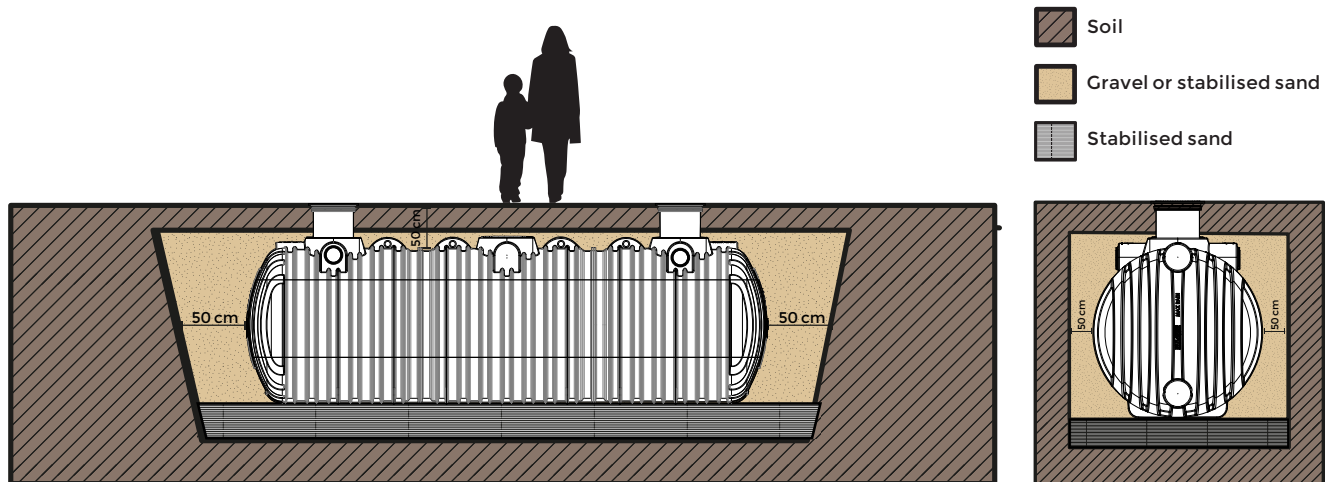
### Safety and handling:

- When handling the MAX RAIN tanks, use transport and hoisting equipment suitable for the load that meets all applicable safety standards.
- During transport, avoid sudden movements that could compromise the integrity of the tank.
- Hoist the tank only when completely empty. Never stand under the load.
- For hoisting, only use cables or straps that are in perfect condition and suitable for the load. Attach the cables or straps to the hoisting eyes on the tanks. Attach the hoisting cables in a symmetrical manner to avoid the load getting out of balance. Keep in mind the hoisting angle, which must NEVER be less than 45° (see image below).



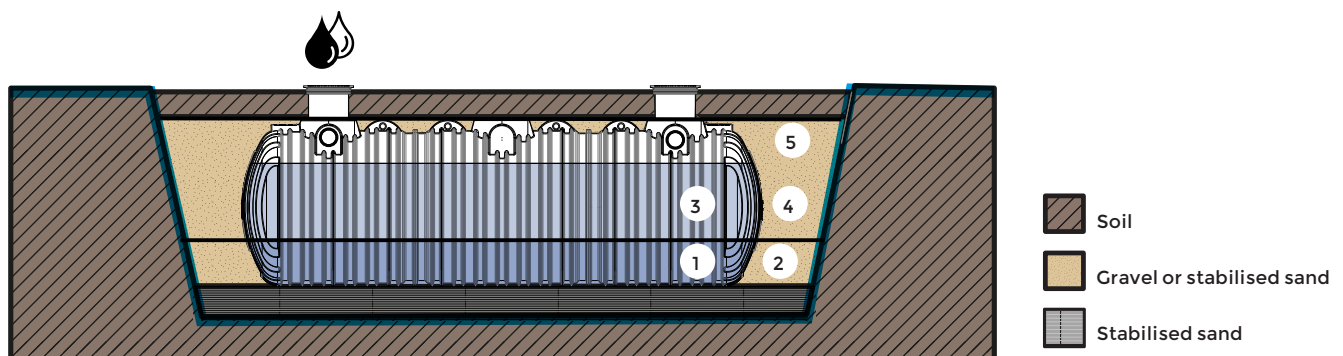
## 1. LOAD CLASS A15 - PLACES ACCESSIBLE FOR PEDESTRIANS, CYCLISTS, GREEN AREAS

Dig a hole of suitable dimensions with a flat bottom, leaving at least 50 cm around the tank. Spread a layer of stabilised sand of 15 to 20 cm thick on the bottom of the pit and rest the tank on a uniform and level base. The tank can be installed immediately, before the stabilised sand has hardened. Excavated soil should not be used as backfill. Pits must be dug at least 1 m away from any structure.



### 1.1. Fill the tank with water simultaneously

Place the whole, empty tank on the layer of stabilised sand on the bottom of the pit. Gradually fill the tank with water and simultaneously backfill with 2-6mm washed gravel or stabilised sand. Repeat with successive 15-20cm layers: each time, first fill the tank and then backfill with gravel. Fill the tank to 3/4 of its capacity and fill in the last 40 cm of the pit with backfill (no clayey/chalky material, no excavated soil). Never use backfill with sharp edges to avoid excessive pressure on the tank.

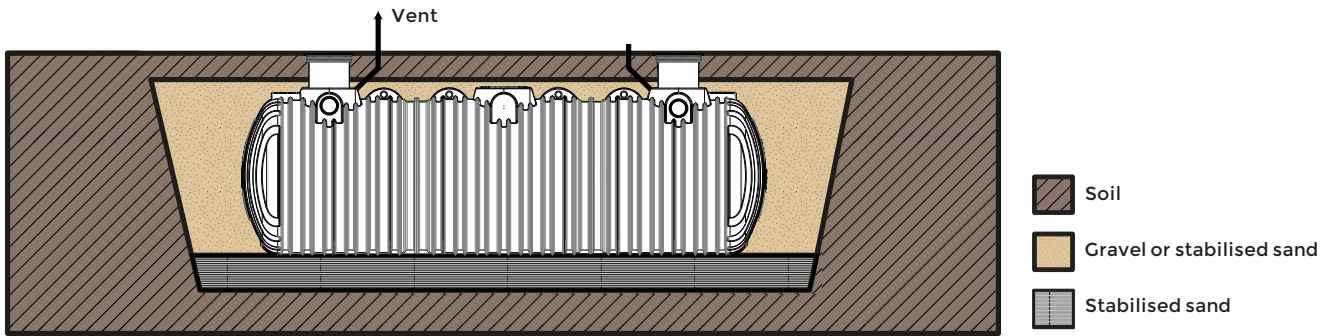


### 1.2. Backfill

Once the tank has been filled and the pit has been properly backfilled, gradually cover the entire area with backfill (no clayey/chalky material, no excavated soil) to a depth of 30 to 40 cm; do not cover the inspection manholes. Now the area is suitable to walk across, but motor vehicles should not drive over it within a radius of 2 m around the pit.

See chapter 2. Light traffic - class b125-en-124/95 - max. 12.5 tonnes / 3. Heavy traffic - class d400-en-124/95 - max. 40 tonnes to make the site passable for motor vehicles.

### 1.3. Vent connection in case of biogas or pump



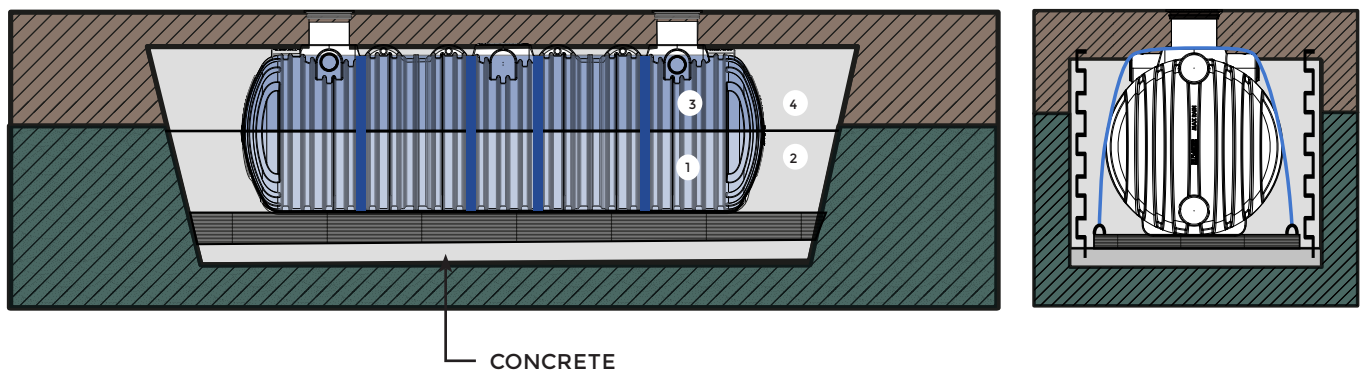
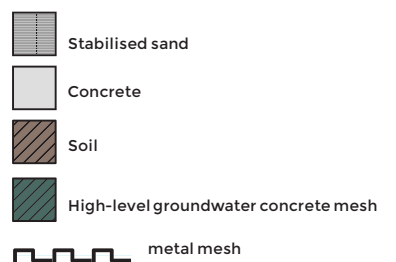
- A) When installing an (internal or external) pump, always choose a correctly-sized free-standing outward air vent. This will prevent the creation of a vacuum and the tank from deforming when the pump is operating. After connecting the air vent, make all necessary connections and check them.
- B) Always connect a (PVC or PE) pipe to the biogas vent connection on the tank cover to prevent bad odors and to make sure the control unit can work properly. Run the pipe to the highest point of the building or next to the drain pipes, but in any case towards a point above the tank cover. The pipe indicated as the vent on the drawing is not included in the delivery.

### 1.4. Installation of manholes with adapted covers (covers not included in the delivery)

Manholes or covers weighing more than 50 kg must always be firmly fixed in the self-supporting concrete slab and must be correctly designed to support the load and to distribute it evenly over the tank. Therefore, the slab must not be built directly onto the tank. It should rest on undisturbed, load-bearing soil. Avoid masonry structures that would make maintenance work on or potential replacement of the tank more difficult.

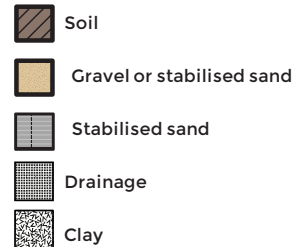
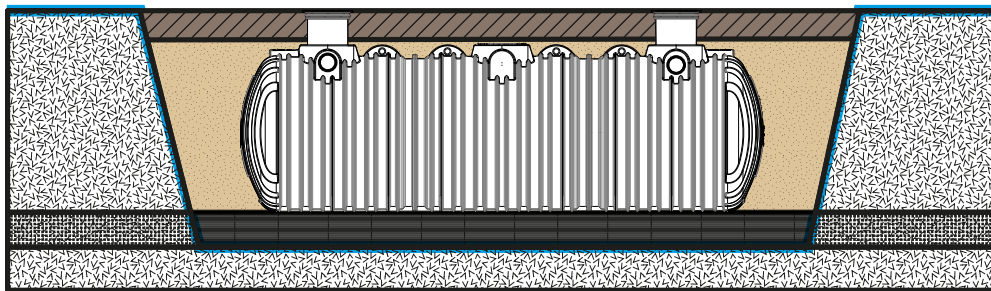
### 1.5. Installation in groundwater zones

Installation in groundwater zones is not recommended, because this is one of the riskiest places to install tanks. In this case a geotechnical report from an expert is recommended, which will determine the groundwater pressure and provide a suitable design for the backfill material and slab. An expert will design the backfill with the required capacity to withstand the high lateral pressure. Resistance can be increased by adding metal mesh. Build the concrete slab at the bottom of the pit and spread a 10cm layer of stabilised sand to fill the spaces between the ribs at the bottom of the tank. Filling the tank and backfilling the pit must be done step by step. It is recommended to fill the tank halfway, at the same time fill the pit with concrete and then let sit for 24 to 36 hours [items 1 and 2]. Then fill the tank until full and backfill the pit [items 3 and 4].



## 1.6. Installation in areas with clay or chalky soil

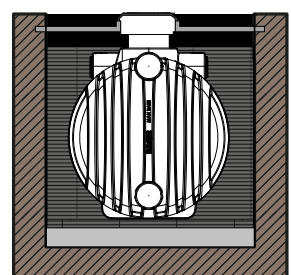
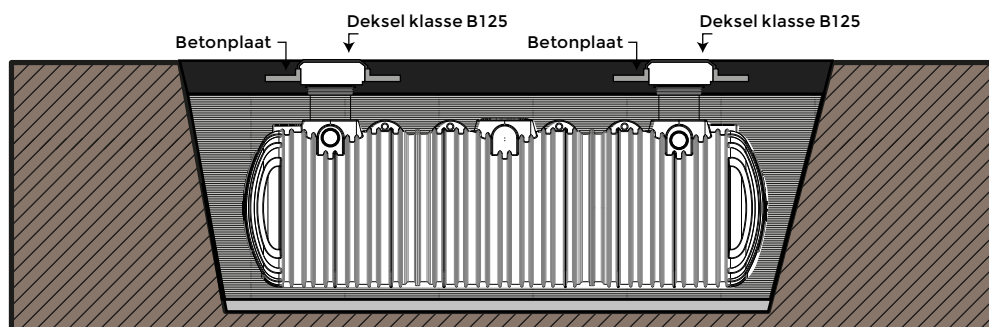
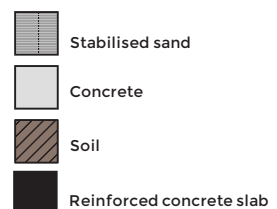
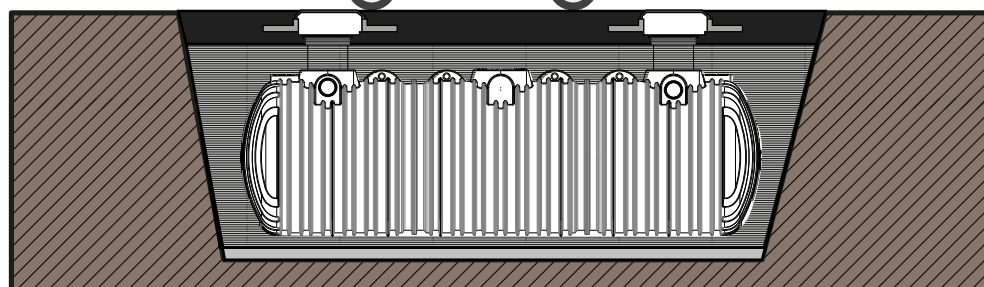
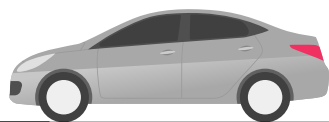
Another disadvantage is installing the tank in areas with subsoil consisting mainly of clay/ lime, limiting the soil's drainage capacity. In this case, too, an expert geotechnical report is recommended. The information from this report will allow the installation engineer to estimate the expected (in this case high) soil pressure and design a suitable backfill material. The bottom of the excavation pit should be covered with a layer of stabilised sand. (A 20-30mm layer of) gravel should be used as backfill on the sides of the tank to promote drainage. For how to fill the tank and backfill the excavation pit, see section 2.1. A drainage system should also be planned at the bottom of the pit.



## 2. LIGHT VEHICLES - CLASS B125-EN-124/95 - MAX. 12.5 TONNES

To make the site suitable for crossing light vehicles, a self-supporting reinforced concrete slab must be added, designed in proportion to the load. The circumference of the slab must be larger than the excavation pit to prevent the weight of the slab from resting on the tank. We also recommend putting a concrete slab (e.g. 15-20 cm thick) at the bottom of the pit and covering this in a 10cm thick layer of stabilised sand to fill up the spaces between the ribs at the bottom of the tank. The self-supporting reinforced concrete slab and the concrete base must always be designed by a qualified professional. The tank should always be filled and backfilling the excavation pit should always be done step by step, as specified in paragraph 1.1.

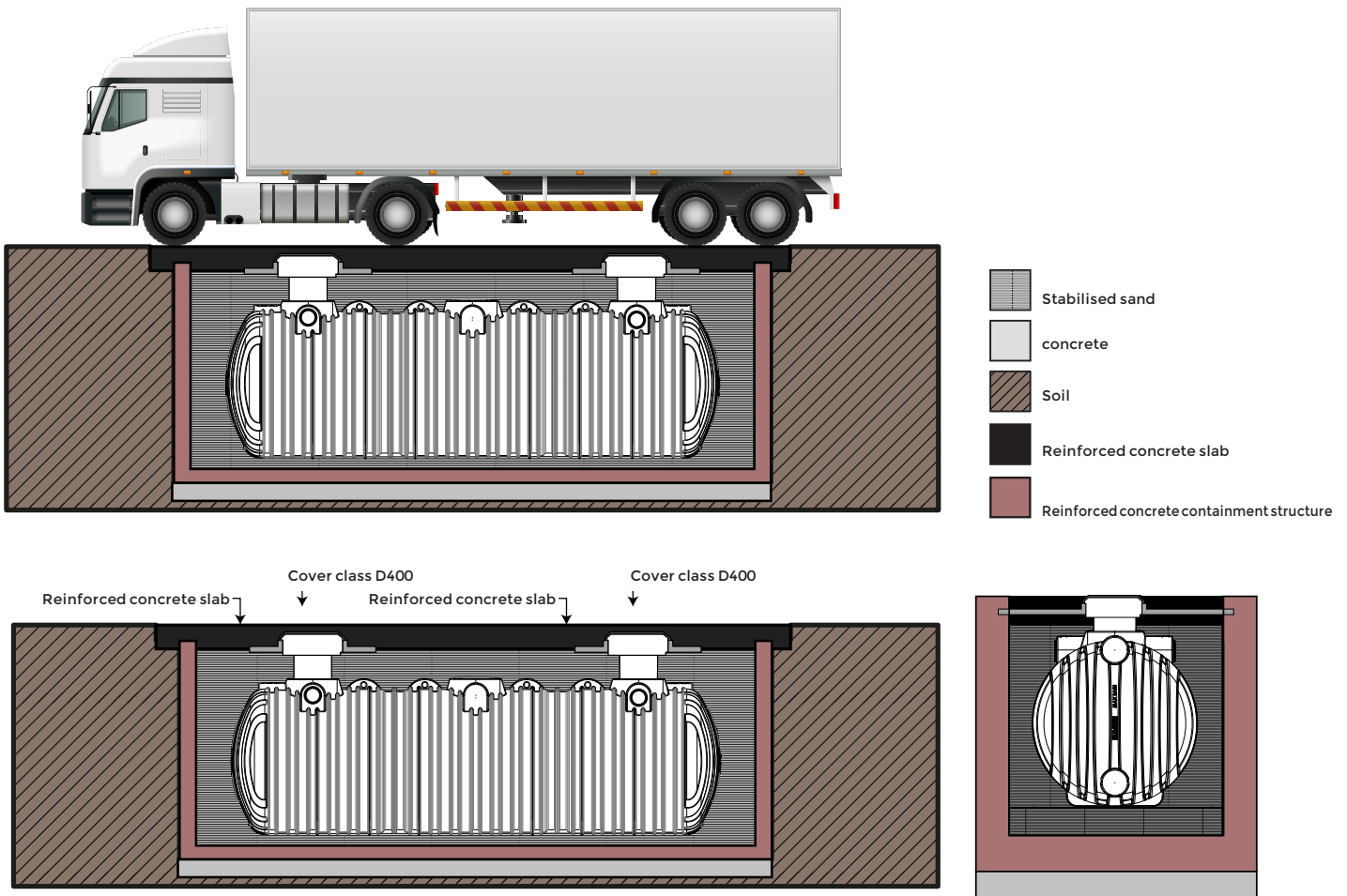
\* The covers delivered with the tank are integrated and must not be used as covers suitable for crossing vehicles.



### 3. HEAVY TRAFFIC - CLASS D400-EN-124/95 - MAX. 40 TONNES

To make the site suitable to cross for heavy vehicles, a reinforced concrete containment structure must be cast on the spot with a suitable reinforced concrete cover slab. The circumference of the slab must be larger than the excavation pit to distribute the load across the containment walls so it does not rest on the tank. Then put a 10cm thick layer of stabilised sand on the bottom of the containment structure to fill up the spaces between the ribs at the bottom of the tank. The reinforced concrete containment structure and top slab must be designed by a qualified professional and in proportion to the expected loads. The tank should always be filled and backfilling the excavation pit should always be done step by step, as specified in paragraph 1.1.

\* The covers delivered with the tank are integrated and must not be used as covers suitable for crossing vehicles.



## **WARNINGS**

- Underground tanks must not be installed above ground;
- Before installation, carefully check the integrity of the tank and the tightness of the gaskets;
- Do not install the tanks in the vicinity of heat sources;
- Tanks must be installed on a flat, stable surface. Special care should be taken in areas with soil instability. When installing the tank, always adhere to the installation requirements provided (see installation instructions);
- Do not let the tank sit for extended periods of time with no/open cover;
- For the storage of liquids not expressly included in this catalogue, please contact our technical department.

## **USE AND MAINTENANCE**

- When carrying out maintenance work and cleaning the tank and all of its components, always comply with the requirements specified in the safety regulations on temporary or mobile workplaces;
- Keep the area around the tank free from any material that could obstruct such maintenance work;
- When inspecting the tank and carrying out cleaning work, always work in pairs and wear appropriate PPEs (harness, straps, gloves, etc.);
- Make sure any PVC inlet, outlet, overflow pipes or brass or plastic filling, discharge, full drainage connections are not blocked by large solid substances preventing the liquid from entering or leaving the tank. Remove any sediment.