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# Technical description for waste tank

Date:
**22.02.2024**

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# 1. General

The following description refers to the design of the new waste tanks.

## 1.1. Basic data

| **Type** | 8‘ | **10‘** | **20‘** |
|---|---|---|---|
| Length | 1.395 mm | 2.989 mm | 6.055 mm |
| Total length | 1.596 mm | 3.177 mm | 6.250 mm |
| Width | 2.435 mm | | |
| Height | 690 mm | | |
| Empty weight | 410 kg | 710 kg | 1.100 kg |
| Capacity | up to 1.5 m³ | up to 3,5 m³ | up to 7 m³ |
| Forklift pockets distance | 950 mm | | |
| Inside clearance of forklift pockets | Width 290 mm x Height 90 mm | | |
| Inside diameter of inlet opening | 123 mm | | |

## 1.2. Construction

The welded steel frame construction consists of:

- 12 outer corners (8 with 10' option) welded from 6 mm sheet metal, adapted to ISO standards
- Floor panels 3 mm, smooth
- Floor beam 3 mm, shaped tube
- Side panel 3 mm, smooth
- Roof panel 1.5 mm corrugated, incl. inspection opening:
  20‘ - 1.200 x 2.050 mm / 10‘ - 380 x 2.300 mm / 8‘ - 1.300 x 1.500 mm
- Welded edge lug for 8' option

# 2. Description

The following equipment is included on one end:

- 2-way flange ball valve 4" made of brass, 1 PC (omission optional)
- Level indicator with replaceable inspection tube, 1 PC
- Vent pipe, 1 PC
- Inlet openings with chain-secured plastic lid, 2 PCS

The following products are available optionally:

- Landing, galvanised — Grate: standard or fine
- Additional handrail for landing, galvanised
- Staircase
  4-tread, including handrail on both sides, galvanized — Grate: standard or fine
  Tread width: 1,000 mm

Stairs and platforms cannot be used in the area of the connectors.

# 3. Paint

**Inner coating:** Bitumen paint, 200 µm coating thickness
**Exterior paint:** PUR base and top coat, 80-100 µm coating thickness

These achieve shades similar to RAL. We do not accept liability for colour variations in comparison with the RAL tones.

# 4. Instructions

The content of the instructions must be taken into account and observed by the customer and the subsequent users and trades.

## 4.1. Handling / Transport

The waste tanks should be transported on suitable trucks. The local laws for load securing must be adhered to.
The waste tank has no internal partitions to prevent contents from overflowing. Handling and transport are only permitted when they are completely empty and only by authorised specialist personnel/specialist contractors.

The following handling instructions must be observed:

1. The waste tanks can be lifted with a forklift (min. fork length 2,450 mm, min. fork width 200 mm) or with a crane with sufficient lifting capacity. The lifting equipment (ropes, round slings) must be attached to the upper outer corners of the container. When using round slings, the lower outer corners of the container can also be used.

2. The angle between the lifting rope and the horizontal must be at least. 60°.
   The chain length required for a 20' / 10' / 8' waste tank is at least 6 m / 3 m / 2.4 m, see Figure 1.

3. Due to the construction and design, handling with a spreader is not possible!

4. A maximum of 4 waste tanks may be stacked on top of each other.

5. Between the individual waste tanks (for 10' and 20'), centering elements (stacking cones) must be used on the outer container corners and support shims (only for 20') must be used in the middle between the roof and floor side rails, see Figure 2.

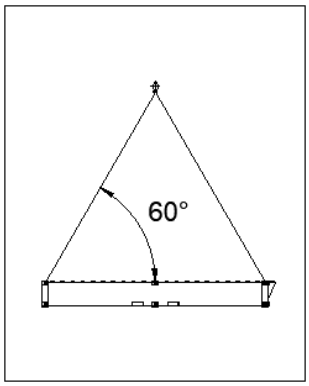

Figure 1

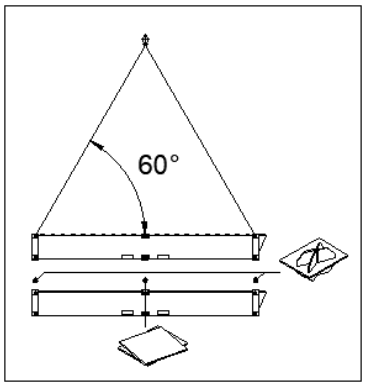

Figure 2

## 4.2. Installation

When selecting an installation site, a sufficiently large and paved access road must be available so that handling and access for later emptying is guaranteed. The waste tank is suitable for operation at temperatures from 0 to +40 °C. Use of the waste tank at lower temperatures is only permitted with suitable thermal insulation and/or heating. The relevant measures are to be taken by the customer.

Each waste tank must be placed on level foundations with 4 - 6 support points (depending on the version) provided by the customer. Foundations must be adapted to local conditions, standards and the depth of frost, taking into account the nature of the soil and the maximum loads that may occur. The design of the foundations must ensure a free flow of rain water and sufficient ventilation underneath. The customer must carry out the relevant measures. See Figures 3 - 6 for a schematic foundation plan with required foundation points.

Minimum size of foundation point: 350 x 350 mm

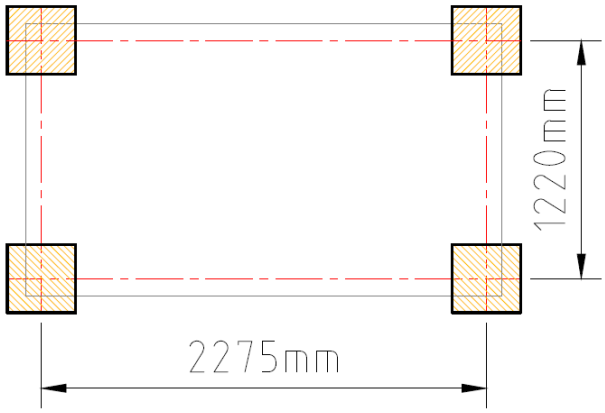


Figure 3: 8' waste tank with BM/SA Box

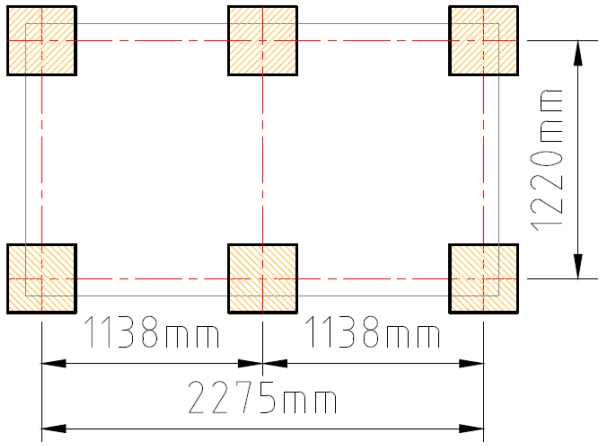


Figure 4: 8' waste tank with 1x or 2x BM/SA Box 5'

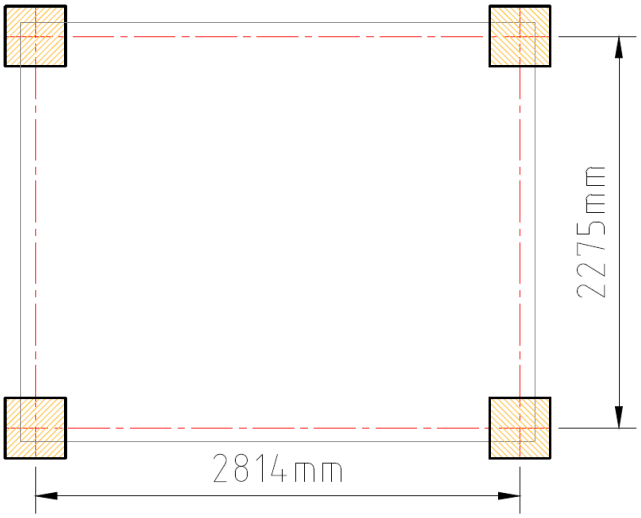


Figure 5: 10' waste tank

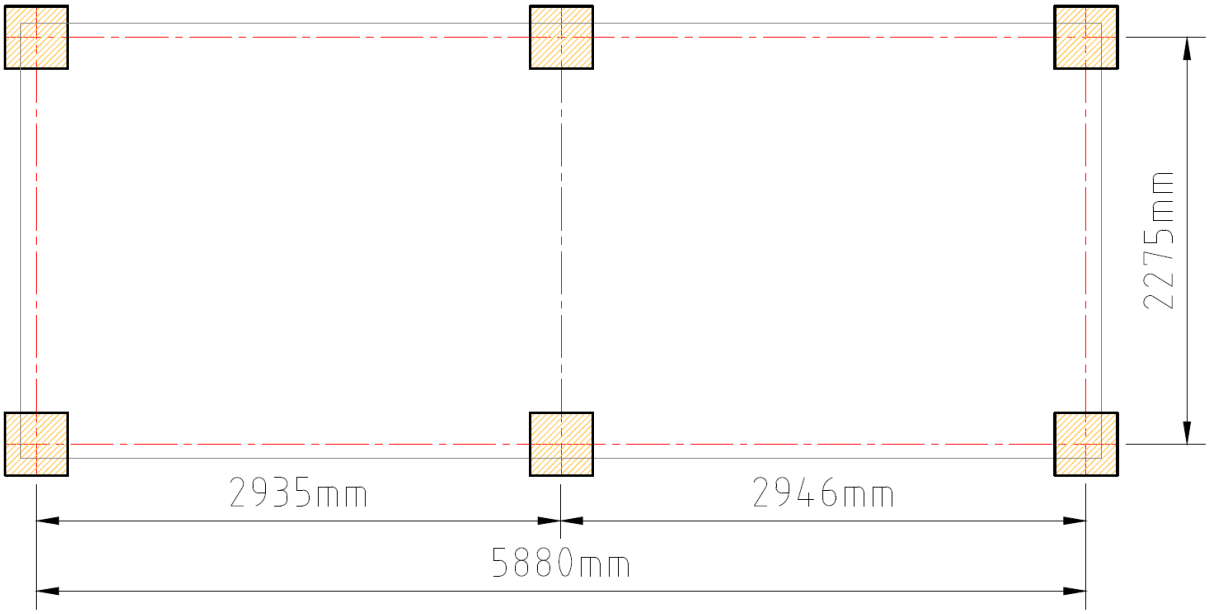


Figure 6: 20' waste tank

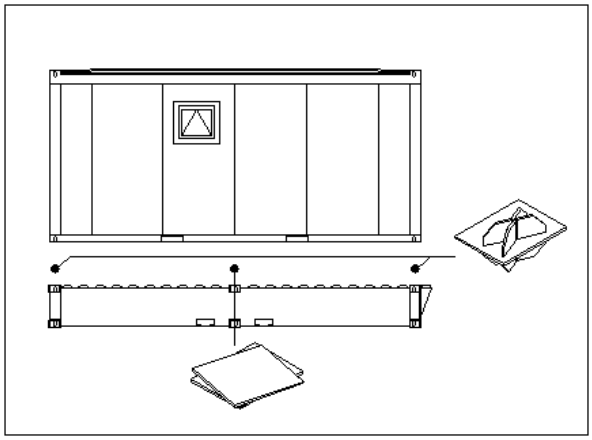

Figure 7: Stacking cones (for 10' and 20') and support shims (only for 20')

The waste tank can be positioned at ground level or in the ground. When digging out the ditch for the foundations, make sure that it is 200 mm larger than the outer dimensions of the foundations. The foundations are to be produced taking the above description into account and a gravel bed with a height of 150 to 200 mm and a grain size of 0-16 must be prepared in the area between the foundation points. To protect the exterior paintwork, a geotextile fleece with a minimum density of 200g/m³ should be placed on the gravel bed. The lateral boundary to the ground (gravel bed + geotextile fleece) must be present on all sides of the waste tank. Free access to the level indicator, the vent pipe and the two inlet openings must be guaranteed at all times.

After successful levelling of the waste tank onto foundations, the sanitary cabin or the BM/SA Box can be positioned onto the waste tank.. The following must be observed:

- Maximum vertical load of 30 kN / outer corner must not be exceeded.
- The sanitary cabin must be secured against lateral displacement (slippage). Between the waste tank (10' and 20') and the sanitary cabin, stacking cones must be used on the outer container corners and support shims must be used in the middle between the roof and floor side rails, see Figure 7.
- Sufficient ventilation between the waste tank and the sanitary cabin, from below or behind, must be guaranteed.
- 1 x 20' sanitary cabin or 1 x 10' sanitary cabin can be positioned on 1 x 20' waste tank.
- 1 x BM/SA Box 8' or 1-2 x BM/SA Box 5' can be positioned on top of 1 x 8' waste tank.

The flanged ball valve must be checked for leaks prior to commissioning (possible loosening during transport). Finally, the drain pipework of the sanitary cabin can be connected to the inlet opening of the waste tank.

## 4.3. Use / Emptying

The inner coating of the waste tank has good resistance to the most common cleaning agents and chemicals.

The frequency of emptying depends on the frequency of use, how full the waste tank is, the outside temperature and the additives and chemicals used. From a hygiene point of view and to prevent excessive deposits of sludge and sediment, it is advisable to empty the tank more frequently, but at least 3 times a year. Through the targeted use of bacteria and enzymes, which are used for the purpose of septic tanks, the amount of sludge and sediment can be reduced and unpleasant odours can be reduced.

The current fill level of the waste tank can be read on the fill level indicator, which is found on the front side. If the water mark on the fill level indicator reaches the red mark, the waste tank must be emptied immediately. It is emptied by inserting the suction hose of the sludge pump or a waste water truck into the free inlet opening. In order to pump out the maximum amount, the waste tank can be lifted slightly at the opposite end using a forklift, crane truck or similar. The following must be observed:

- The waste tank may only be tilted when it is about 40 mm full.
- The waste tank may only be tilted without a sanitary cabin stacked above it.
- The inclination height must not exceed 400 mm.

## 4.4. Maintenance

A visual inspection of the exterior paintwork and the interior coating as well as the surrounding sheet metal and the supporting frame construction must be carried out at regular intervals, but at least once a year.

| Problem | Measures |
|---|---|
| Damaged exterior paintwork | Roughen the damaged area with sandpaper (grit 100-150) and paint with 2k-PUR paint |
| Damaged interior paintwork | Empty and clean the waste tank<br>Apply a generous amount of new bitumen paint to the damaged area |
| Deformation of surrounding panels | Check affected area for damaged welds (e.g. cracks) (professional repair if required). If necessary, restore exterior paintwork (see above). |
| Penetration of surrounding panels | Empty and clean the waste tank<br>Commission professional repairs. If necessary, restore exterior paintwork / interior coating (see above). |
| Deformation of the supporting frame construction | Evaluation of the damage and condition of the waste tank by an authorised specialist company. |

The waste tank must be cleaned regularly using hot water jets and soft plastic brushes. An inspection flap in the middle of the roof panels serves as access.

Each waste tank is tested for water tightness in the production plant, which is why there may be small amounts of water in the waste tank upon delivery. Metal dust introduced during the manufacturing process can form the smallest rust particles in the waste tank. Generally, these particles are located in the area of the inlet openings on the bottom of the waste tank. This is an unavoidable introduction of metal dust, which doesn't constitute a defect.

## 4.5. Storage

After the waste tanks have been cleaned, they must be positioned on a flat, solid surface for storage. A maximum of 8 waste tanks can be stacked on top of each other. The waste tanks must be secured against lateral displacement (slippage) and lifting due to wind loads or other load effects. The customer must carry out the relevant measures. We recommend carrying out safeguards (bracing, bolting, supports, etc.) and/or strengthening with authorized specialists. The roof panels of the waste tank are not suitable for storage of any kind.

# 5. More information

Before starting the work, a risk analysis must be carried out in accordance with the local requirements and the applicable provisions on site. Necessary measures must be implemented by the assembly personnel.

Any warranty for damage resulting from improper handling is excluded. Liability for consequential damages is excluded in principle.

Official and legal requirements regarding the storage, installation and use of the waste tanks must be observed by the customer.

The suitability of the waste tank and any supplied accessories for the intended use must be checked by the customer.

Technical changes, printing errors, typographical errors, and mistakes reserved.

This document is a translation of the German version and is subject to translation and spelling errors. If in doubt, the German version must be consulted.