

Installation Instructions

ZBin Maxi

1. Preparation

Read the installation instructions carefully before beginning with the installation. The warranty is only valid if all of the included instructions are carried out correctly. When deciding on the exact location for placing the ZBin one must take into consideration the accessibility for the emptying truck by means of a crane. Consultation with the company that will perform the emptying is necessary for this. Check on site if no underground public utility lines or other objects are present in the soil.

2. Transportation and relocation

During transport and handling one should pay extra attention not to drop, roll or bump the ZBin container. The ZBin should always be placed on a flat surface to avoid damage.

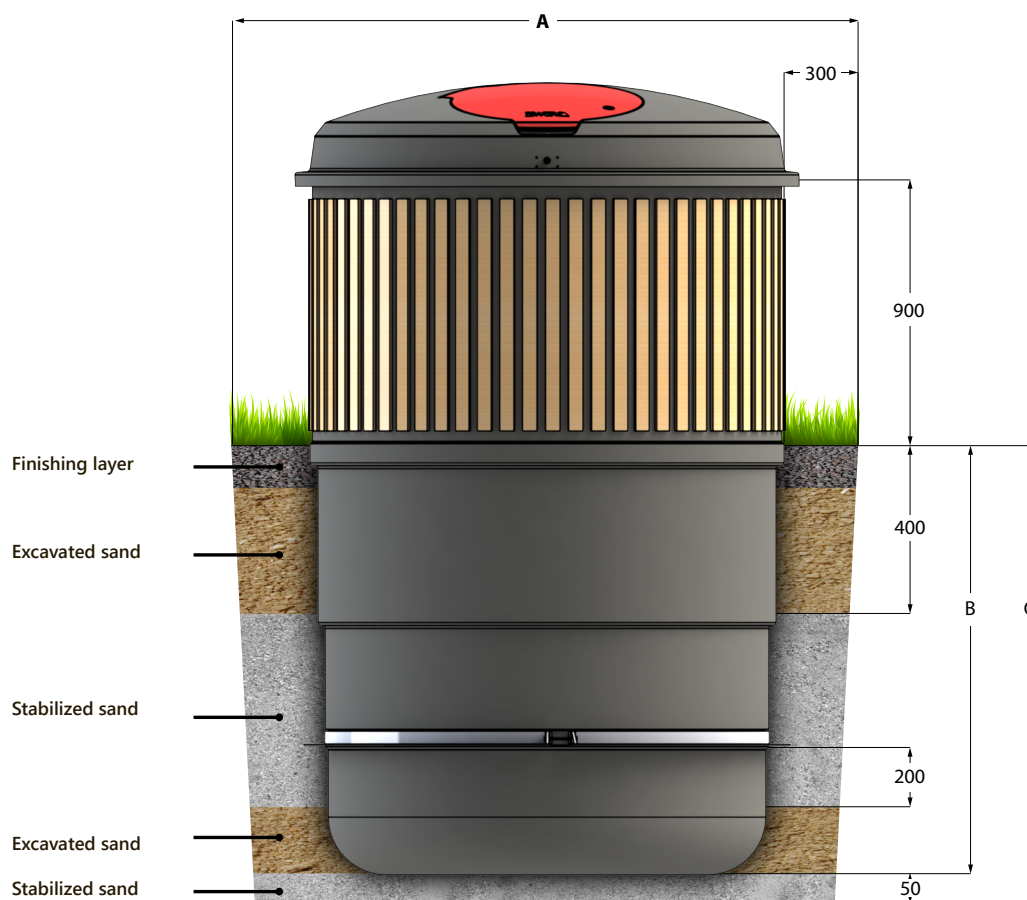


Figure 1. ZBin container with different layers of sand for the installation

3. Dig hole dimensions

| ZBin | 1500 L | 3000 L | 5000 L |
|-------------------|---------|---------|---------|
| A Diameter | 1650 mm | 1900 mm | 2300 mm |
| B Height | 1500 mm | 1500 mm | 1500 mm |
| C Depth | 1550 mm | 1550 mm | 1550 mm |

Table 1. All ZBin containers with the hole to dig for installation

4. Excavation & dimensions

The dimensions of the excavation shall be so that around the entire ZBin a minimum lateral distance of 300mm remains free to supplement and anchoring with excavated soil and stabilized sand (150 kg/m³). The excavation must be deep enough for the required installation depth including the foundation (see Table 1. for all dimensions by type). At high water level, a pump should be used to make sure the hole is clear of water. Reinforce the walls if necessary.

5. Foundation

The excavation must be provided with a stable foundation which is levelled properly. Apply a layer of at least 50mm thick of stabilized sand (150 kg/m³) to which the ZBin can rest.

6. Placement

Remove the lid from the ZBin. In case there is a cover with a hinged lid you must open the lid. Use a four-point chain hooked underneath the upper aluminum ring of the container and place the ZBin with the aid of a crane in the excavated hole. When placing multiple ZBins make sure to keep at least **400mm** around them free for the accessibility of the ZBins.

7. Backfilling

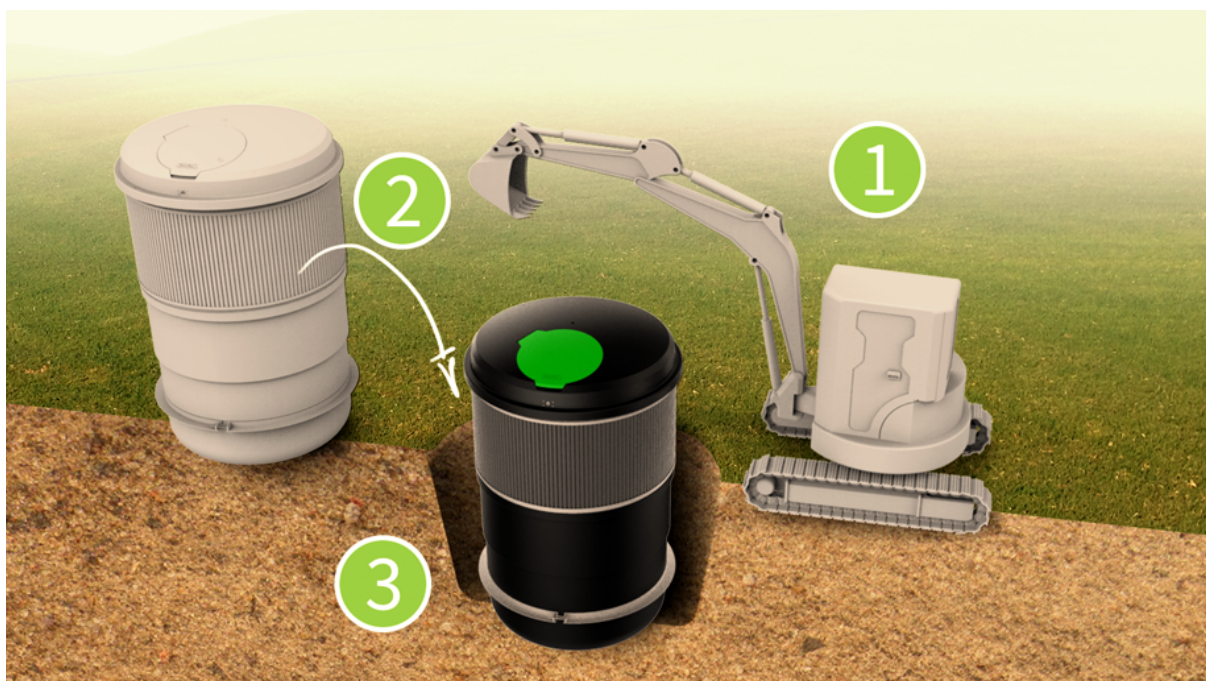
Fill the space around the container to 200mm below the anchor ring with excavated soil. Fill the area around the anchor ring with stabilized sand to 400mm below ground level. And finally fill the remaining space with excavated soil to ground level (see Figure 1). In the case of a specific finishing layer the height of this layer should be taken into account.

- Only use soil stripped of rubble and stones.
- Carefully consolidate manually per layer of 350mm without deforming the container.
- Check regularly after consolidating whether the container is still level.

8. Finishing

If the ZBin is shipped not assembled : insert the inner part (lifting bag or hard lifting container or metal container) in the ZBin. If this was applied, **remove** the shrink wrap packaging (transport protection) on the outside and **remove** the two blue webslings. Place and/or close the lid on the container. The ZBin is now ready for use.

Installation & service visualization



Easy Installation

- 1) First, a small excavator digs a hole for the bin.
- 2) Secondly, the bin is placed with a small crane (possible with the same machine).
- 3) At last, the ground around the bin is poured back and compacted.

Additional information for different types of ballast

We recommend to work with stabilized sand or sand/concrete mix. But if, for any reason, this is not possible, we try to provide alternative ballast possibilities to prevent the ZBin container to be lifted out of the ground. The objective of the ballast is to create a solid mass material above the anchor ring, which is superior in weight than the uplifting force that is subjected on the container if there is water surrounding the container.

Stabilized sand

The preferred ballast material to be used is stabilized sand or sand/concrete mix. For one m³ of stabilized sand you must use 1500 kg of sand & add 150 kg of cement and 75L of water. This results in a weight of +/- 1650 kg/ m³.

| Stabalized sand | ZBin 1500 L | ZBin 3000 L | ZBin 5000 L |
|--------------------------|-------------|-------------|-------------|
| Volume balast | 0,60 m3 | 0,90 m3 | 1,60 m3 |
| Height above anchor ring | 400 mm | 500 mm | 700 mm |

Dry concrete

Dry concrete is often made on the building site itself. It contains less water and cement than normal concrete. It basically works in such a way that the extra needed water is absorbed slowly from the soil. This mix is made up 1000 kg sand and 200 kg cement 1100 kg stones and 50L of water. This results in a weight of +/- 2000 kg/m³.

| Dry concrete | ZBin 1500 L | ZBin 3000 L | ZBin 5000 L |
|--------------------------|-------------|-------------|-------------|
| Volume balast | 0,50 m3 | 0,80 m3 | 1,50 m3 |
| Height above anchor ring | 400 mm | 450 mm | 600 mm |

Concrete

This type of ballast is only used when there is very unstable soil. The difficulty with concrete in combination with the installation of a ZBin is that because the concrete is liquid , the container will undergo un uplifting force. To compensate for this you will need to **put extra weight inside the ZBin container** to prevent it from getting out of the ground. It is advised to keep this weight inside the containers until the concrete is completely set. For one m³ of concrete you need 800 kg sand and 350 kg cement and 1000 kg stones and 150L water. This results in a weight of +/- 2500 kg/m³.

| Concrete | ZBin 1500 L | ZBin 3000 L | ZBin 5000 L |
|--------------------------|-------------|-------------|-------------|
| Volume balast | 0,50 m3 | 0,70 m3 | 1,20 m3 |
| Height above anchor ring | 300 mm | 400 mm | 500 mm |

Uplifting Force

The uplifting force is only applicable if there is water or a liquid substance around the container. Because the liquid will want to push the container up, this will result in a force exerted on the anchor ring. In the table below you see the maximal uplifting force that the container can exert on the ring.

| Uplifting force | ZBin 1500 L | ZBin 3000 L | ZBin 5000 L |
|-----------------|-------------|-------------|-------------|
| Force in Newton | 9100 N | 14400 N | 26000 N |