

Installation Instructions Z-Bin

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 about the exact location for placing the Z-Bin one must take into consideration the accessibility to 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.

Transportation and Relocation

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



figuur 1. Z-Bin container with different layers of sand for the installation

Dig hole dimensions

	Z-Bin	1500 L	3000 L	5000 L
Α	Diameter	1650 mm	1900 mm	2300 mm
в	Height		1500 mm	
с	Depth		1550 mm	
able 1. All Z-Bin containers with the hole to dig for installation				

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Excavation and dimensions

The dimensions of the excavation shall be such that around the entire Z-Bin a minimum lateral distance of 300 mm 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.

Foundation

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

Placement

Remove de Lid from the Z-Bin. In the case of a cover with a hinged lid you must open the lid. Use a four-point chain hooked underneath the upper aluminium ring of the container and place the Z-Bin with the aid of a crane in the excavated hole.

When placing multiple Z-Bins make sure to keep at least 400mm around them free for the accessibility of the Z-Bins.

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 400 mm 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 35cm without deforming the container.
- Check regularly after consolidating whether the container is still level.

Finishing

Insert a lifting bag in the container. Depending on the waste fraction which the container was purchased for, a liner bag can be placed in the lifting bag. Place and / or close the lid on the container. The Z-Bin is now ready for use.



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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 as 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 1500Kg of sand add 150 kg of cement and 75Litre of water. This results in a weight of +/- 1650Kg/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 50 Litre 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 up lifting 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 800Kg sand and 350Kg cement and 1000Kg 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 only is applicable if there is waster around the containers 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

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