



APLAST
ROTOMOULDING
PIPING | TOOLING



Instructions for Installing an AQUAstay Tank

Thank you for the confidence you gave us by selecting the AQUAstay tank. Many years of production of tanks for water gave us a lot of experience about the correct installation and assembly of our products.

Failure to comply with installation instructions can endanger lives and cause serious material damage, as well as nullifies the validity of the warranty.

Installation instructions are regularly updated.
Use the latest version, available on the website www.aplast.si.

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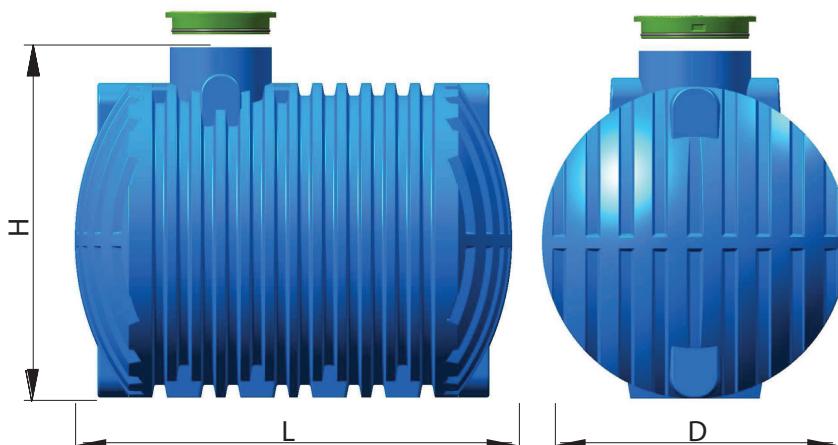
1. GENERAL INSTRUCTIONS FOR SAFE WORK

- The contents of the INSTRUCTIONS for installation and assembly must be followed carefully, otherwise warranty claims cannot be asserted. The tank must be inspected prior to installation and verified whether it has been manufactured in accordance with your requirements. The instructions, which are attached to the bottom of the lid, must be removed, together with the bag and clips.
- Installation shall be carried out by a professional company with qualified experts, who are familiar with the installation instructions.
- Follow the instructions for safe work when executing the works; another person must be present to protect you, especially when manipulating and installing the tank.
- The lid of the tank must be kept closed at all times to prevent the possibility of an accident.
- The tank shall be installed only into previously prepared construction pits and backfilled according to the manufacturer's instructions.
- Placing the tank out in the open is forbidden.
- The choice of lid type depends on the order and the buyer's wishes.
- Only those additional elements that have been specified and authorised by the manufacturer of the tank can be fitted onto the tank. In the event of the installation of unsuitable elements, the manufacturer cannot guarantee proper operation; hence, the buyer cannot assert the warranty rights.
- The images contained in the instructions for installation and maintenance are merely illustrative.

2. AQUAstay TANK

The AQUAstay tank has been manufactured by rotational moulding in three standard versions (L, XL and XXL). The dimensions of external clearances are shown in the table below.

2.1 TECHNICAL DATA



- Entry diameter of inspection chamber Ø 625mm.

Volume	Height (H)	Diameter (D)	Length (L)	Weight	
2.000 l - L			1,45 m	104 kg	
2.500 l - L	1,6 m	Ø 1,4 m	1,75 m	120 kg	
3.000 l - L			2,35 m	132 kg	
3.500 l - XL			1,80 m	158 kg	
5.000 l - XL			2,45 m	216 kg	
6.000 l - XL	2,0 m	Ø 1,7 m	2,90 m	258 kg	
7.000 l - XL			3,35 m	298 kg	
10.000 l - XL			4,40 m	384 kg	
8.000 l - XXL			2,60 m	262 kg	
10.000 l - XXL			3,10 m	308 kg	
12.000 l - XXL			3,65 m	352 kg	
16.000 l - XXL			4,80 m	516 kg	
18.000 l - XXL			5,30 m	556 kg	
20.000 l - XXL			5,80 m	596 kg	
30.000 l - XXL	2,6 m	Ø 2,3 m	8,50 m	856 kg	
40.000 l - XXL			11,20 m	1.116 kg	
50.000 l - XXL			13,40 m	1.376 kg	

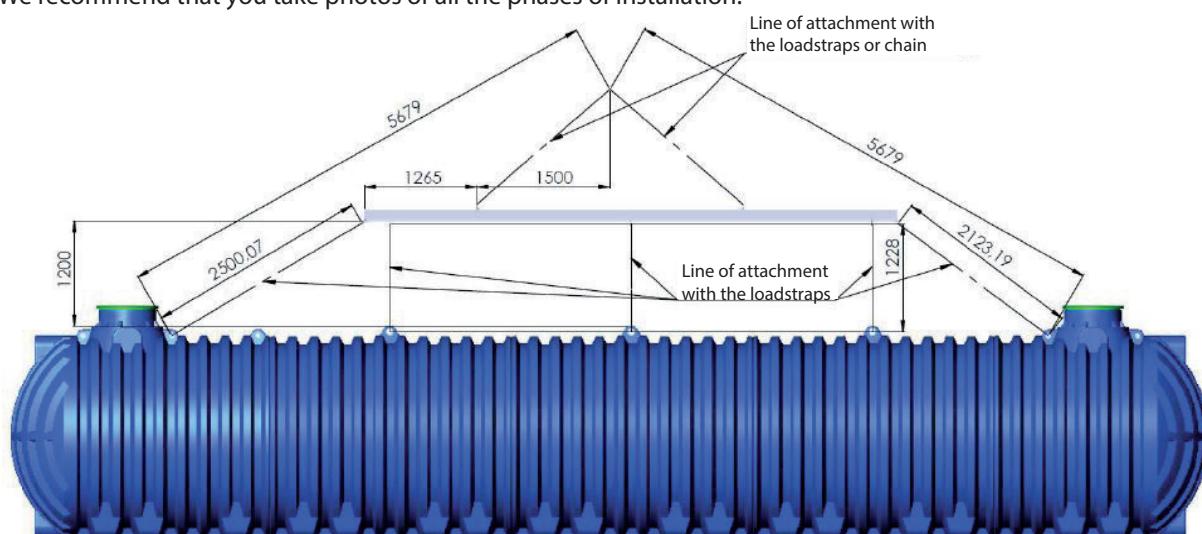
2.2 EXTRAS and FITTINGS

- Connectors for connecting to PE pipes,
- PVC and PE pipes of all dimensions,
- Sand traps of 400 and 500mm in diameter and from 1 to 3m in depth, with a gap of 250mm,
- Entry seals for PVC pipes of 75, 110, 125, 160 and 200mm in diameter,
- A steady inlet, an overflow siphon and filter,
- Lids such as lid with seal and additional protection,
- TELESCOPE or RING (for raising the entrance to the tank).

3. INSTALLATION OF TANK

3.1. UNLOADING OF TANK

When delivered and unloaded, the tank is prepared for burial. Particular attention should be paid to careful unloading, because container can break when falling from the height. To avoid this, tanks with more than 3000l size, are equipped with ears at inspection opening. Tanks, which are larger than 20.000l, have to be unloaded with the help of the console. Unloading using a spoon or a fork of the machine in the middle of the reservoir is strictly forbidden, as it can, due the length and bending of the tank, cause damage. We recommend that you take photos of all the phases of installation.



3.2. PREPARATION OF TANK

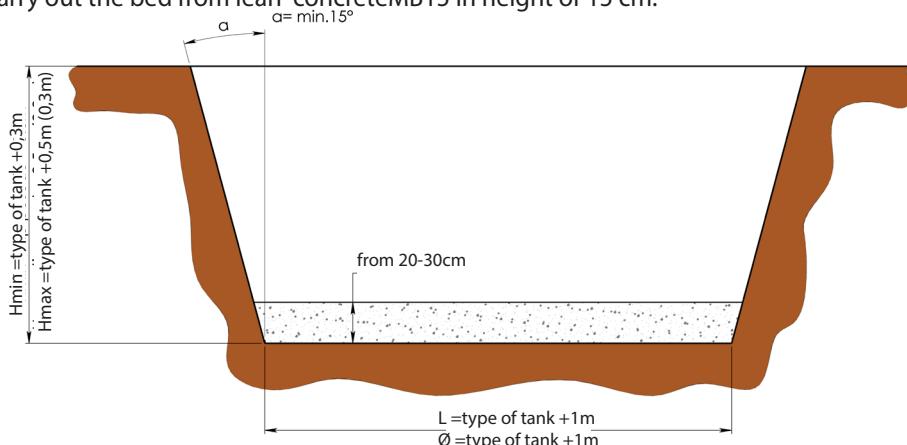
All the basic versions of tanks include a custom-made water outlet. Using a suitable double connector or reducing connector you can connect the outlets to the desired spot. Before lowering it into the construction pit, the tank must be inspected to make sure it was not damaged during transport and whether it appears flawless on the outside.

3.3. ASSEMBLY OF FITTINGS

The tank's entry fittings differ and are adapted to your requirements. You must choose a suitable pipe and the appropriate entry seal. The installation of the seal and the execution of a suitable opening must be carried out by a qualified individual with the tools suitable for such a task (a hole saw, a scraper, a food-grade lubricant etc.)

3.4. EXCAVATION OF A CONSTRUCTION PIT

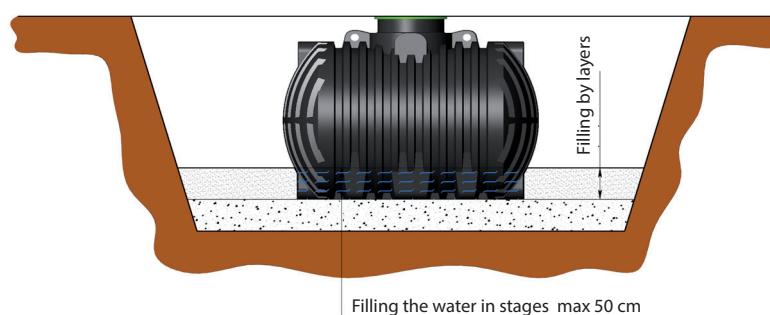
Excavation of the construction pit should be the same as shown in figure below. The maximum depth of the pit should be sufficient for thickness of the bed and height of the tank. In the case of additional upgrades, we could deepen the excavation by 0,5m. Construction pit has to be bigger for approximately one meter around the container and excavated at an angle of 15 degrees. Tank should be placed on the suitable bed, which has to be solid and compact. You have to use suitable filling material. When using round material, it may have a grain size of 0 to 32 mm or between 0 and 16 mm, when using the crushed material. Do not use frozen material. Suitable thickness of bed is between 20 and 30 cm, and must be compressed to a densification of 97% Proctor. In the presence of ground water it is necessary to carry out the bed from lean concrete MB15 in height of 15 cm.



Picture: Excavation of a Construction Pit

3.5. BACKFILLING AND PLACEMENT OF THE TANK

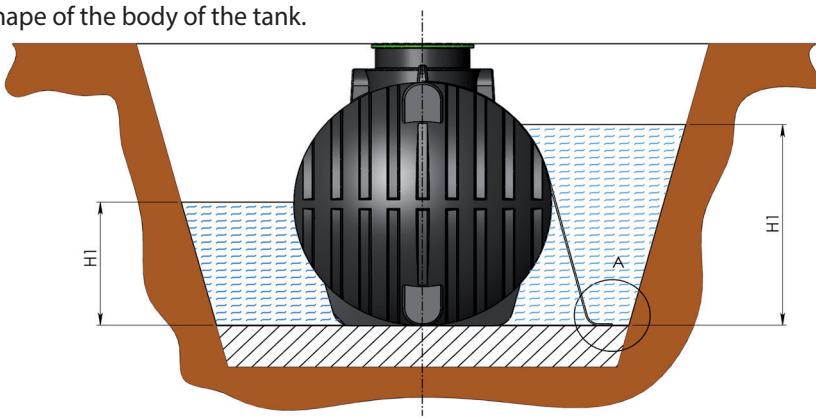
Backfilling the body of the tank requires the use of appropriate backfill material (the same as was used for making the bedding) and the proper execution of backfilling. The backfill material has to be consolidated and compressed carefully and in layers (up to 50 cm in height) to 97% Proctor compaction over a minimum width of 50 cm from the wall of the tank. Simultaneously with backfilling the body of the tank, water must be poured into the tank itself, so that the level of the backfill material equals the water level in the container. When backfilling, pay special attention to the space on the bottom. Using manual aids, fill in and consolidate the entire empty space, thus preventing potential subsequent deformation of the bottom. When backfilling the PE container, make sure that heavy construction machinery does not drive over the body or in the area of backfilling.



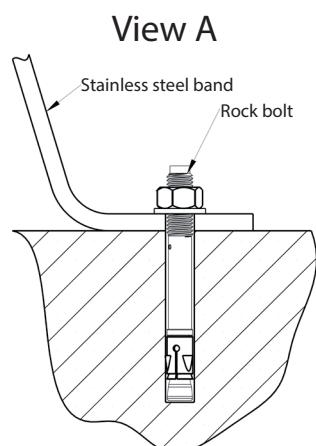
Picture: Backfilling and Placement of Tank

3.6 BACKFILLING AND PLACEMENT OF THE TANK IN THE EVENT OF GROUNDWATER

In case of groundwater it is necessary to consider the level of groundwater. In case of low ground water $H_1 = 30$ cm and up to half of the container, it is required to place a container on a bed of concrete with minimum 15 cm of thickness and filled up by a previously described procedure. In case that groundwater exceeds half of the height of the tank, the tank needs to be anchored. For this purpose, you can use stainless steel band. You can fix it at the bottom of the mortar bed with the help of rock bolt M10 or M12 or with threaded rods with a concrete adhesive. Fixing band may hug the body of the tank and can't be saddled with a tensile force, which could deform the shape of the body of the tank.



Picture: Setting up the tank in case of groundwater



Picture: Detail of the connection with stainless steel band

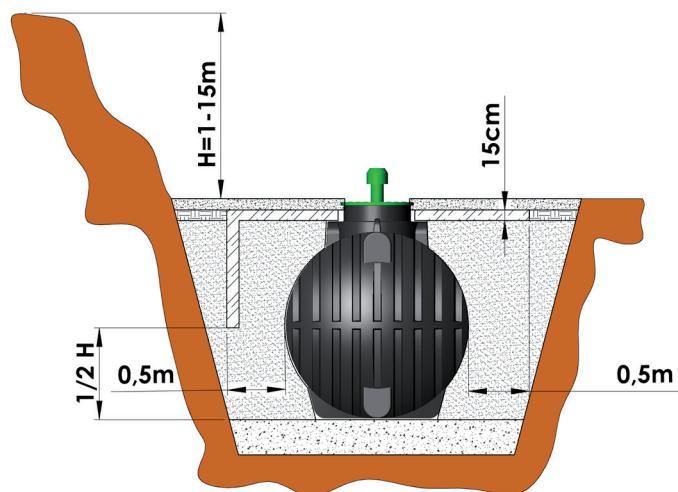
3.7 INSTALLATION OF TANK INTO POORLY PERMEABLE GROUND

In case of installation of tank in an area where soil is poorly permeable and standing water in the construction pit could occur, it is required to drain the water from the pit with a drainage system. The drainage system must remove water so that it does not permanently stay along the full volume of the construction pit, as deformations of the tank casing may occur.

In case that a drainage system cannot be set up, instruction for installation of a purification device in groundwater need to be followed (see chapter 3.6.).

3.8 ASSEMBLING OF TANK IN HILLY LANDSCAPE

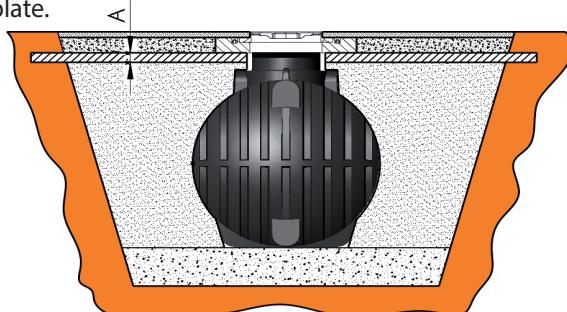
In case you choose area at the foot of the hill, where is the possibility of landslides, it is necessary to protect the tank properly, because it can't tolerate force, which can be retained by a concrete wall. It is necessary to determine the appropriate protection of reinforced concrete with the help of static.



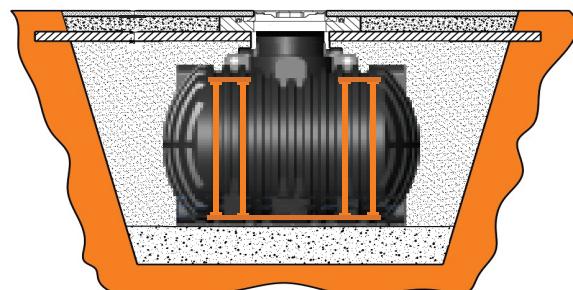
Picture: Assembling of tank in hilly landscape

3.9. INSTALLATION OF TANK UNDER DRIVING SURFACES

Along with following the instructions of point 3.5, when installing a tank under driving surfaces, it has to be suitably protected, as it cannot take on the dynamic load of the driving surface. Statics need to be used to define appropriate reinforced concrete plate, as shown on the figure. Dimension A, as well as concrete mark, are defined by the planner. A special attention is required when pouring the reinforced concrete plate, to support the tank with panneling and support pillars, to prevent deformation and sinking of the tank due to the weight of wet concrete and reinforcement. The panneling support may only be removed after achieved capacity of the concrete plate.



Picture: Installation of Tank Under Driving Surfaces



Picture: Support of Tank With Panneling and Pillars

3.10. ASSEMBLING OF THE EQUIPMENT OF THE TANK

All feed and overflow pipes have to be routed with a drop of 1% in the flow direction. You have to observe settling. All of the suction, pressure and control devices must be routed through the empty protective tube to ensure ventilation. In case of using a pressure booster, you have to provide a vent on the top cover to avoid deformations due to vacuum.



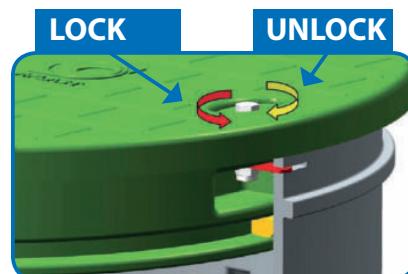
Picture: Assembling of the equipment of the tank

4. ASSEMBLY OF THE LID AND FINISHING WORKS

After the backfilling of the tank is finished, the height of the manhole has to be adjusted to the surrounding terrain by cutting the ring of the tank. Factory-made tags, which allow horizontal cutting, have been made for this purpose. The tank has a factory-installed walkable PE lid with seal, which can be replaced with a cast-iron lid at the request of the buyer. Prior to any assembly of the lid, the seal of the lid must be cleaned and lubricated with a food-grade lubricant. In the case of a lid with a seal, a safeguard can be ordered as an extra, which protects the lid from being opened. This is especially important when children or under-age persons are in the vicinity of the tank. The decision of choosing a lid with a safeguard is made by the buyer; hence in the event of an accident, the seller and manufacturer shall not be held liable for potential consequences if a lid without a safeguard has been chosen.



Picture: The tank can be made higher



Safeguard

Picture: Lid with a safeguard



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