

Installation and maintenance instructions for Platin XL/XXL

7500 L
10000 L
15000 L
20000 L
25000 L
30000 L
35000 L
40000 L
45000 L
50000 L
55000 L
60000 L
65000 L



The points described in these instructions must be observed under all circumstances. All warranty rights are waived in the event of non-observance. Separate installation instructions are enclosed in the transportation packaging for all additional articles purchased from GRAF Australia. Missing instructions must be requested from us immediately.

The tank must be checked for any damage prior to insertion into the trench.

Missing instructions can be downloaded on <https://www.GRAF.com/en-au/> or can be requested from GRAF.

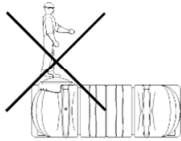
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1. Safety notice

The applicable accident prevention regulations in accordance with the Work Health and Safety Act 2020 (WHS Act) and Work Health and Safety (General) Regulations 2022 (WHS Regulations) must be observed during all work, including excavation and earthwork compliance.

Furthermore, all relevant regulations and standards must be observed during assembly, installation, maintenance and repair. All installation of fittings and arrangements to be undertaken by a suitably qualified plumber. The work must be performed by a licensed plumber and a second person should be present for safety reasons.



Do not walk on the protection cover. The protection cover mounted at delivery only serves against rain and dust during transport and backfilling to the shoulder of the tank. It must be removed and replaced by an appropriate cover following installation instructions (tank plug or dome, extension riser if required, and respective lid option).



The tank access must remain covered at all times, otherwise there is an increased risk of accident. Only original GRAF covers or covers approved in writing by GRAF must be used.

The tank installation must be shock-proof and lifted by adequate equipment into the prepared pit following the lifting instructions. The tank must be lifted completely empty just with the rain/dust protection cover.

All GRAF manufactured tanks comply with AS/NZS 1546.1 and are subjected to our quality system which is QMS:ISO 9001 certified.

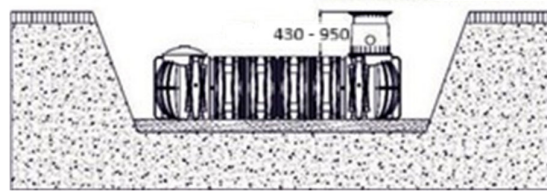
GRAF offers a wide range of accessory parts which are precisely coordinated and can be used to complete systems. The use of different accessory parts can lead to impact the functionality of the system, and to void liability for consequential damages.

Drawings and lifting instructions must be observed while planning unloading from transport provider and lifting to excavation trench. Servicing and associated works should also be planned beforehand, among other reasons, to ensure correct installation and maintenance.

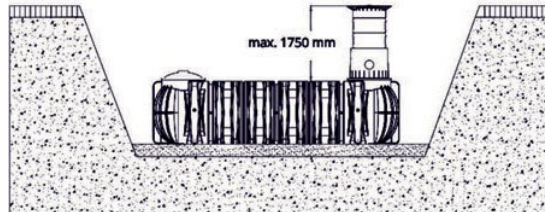
Please consult relevant authority prior to installation.

2. Installation conditions

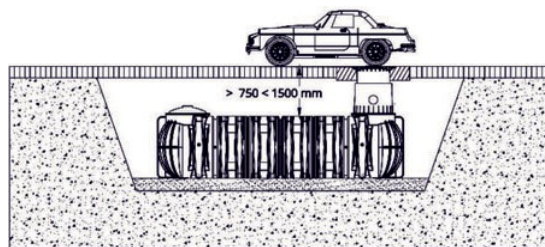
Earth cover in green areas is 430 - 630mm with Mini dome and 750 - 950mm with Maxi dome.



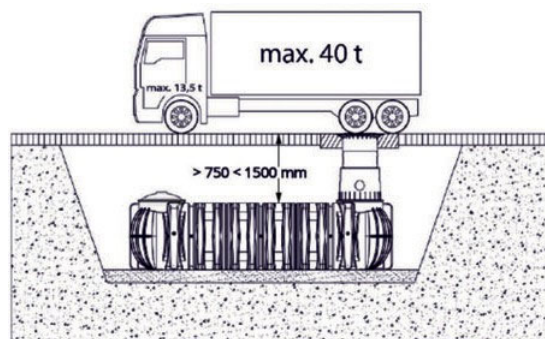
Maximum earth cover with extension riser is 1750mm in pedestrian and landscaped areas only".



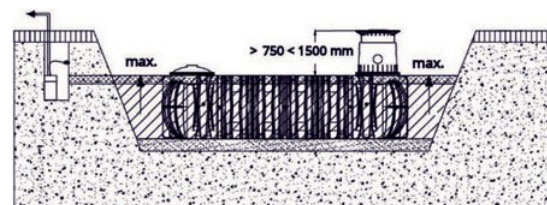
Earth cover with class B cover in areas with car traffic (wheel load up to 3.5 tonnes).



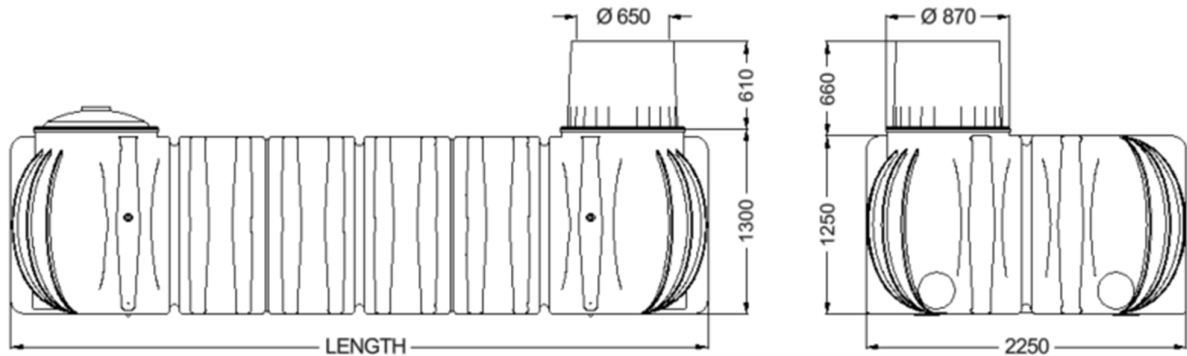
Earth cover with class D in areas with HGV-loading (trucks traffic) (wheel load up to 13.5 tonnes). For vehicle loading more than 40T, refer to Section 6.4



Earth cover in installations with groundwater is 750 - 1500mm. The hatched area specifies the permissible immersion depth: shoulder of the tank.



3. Technical data



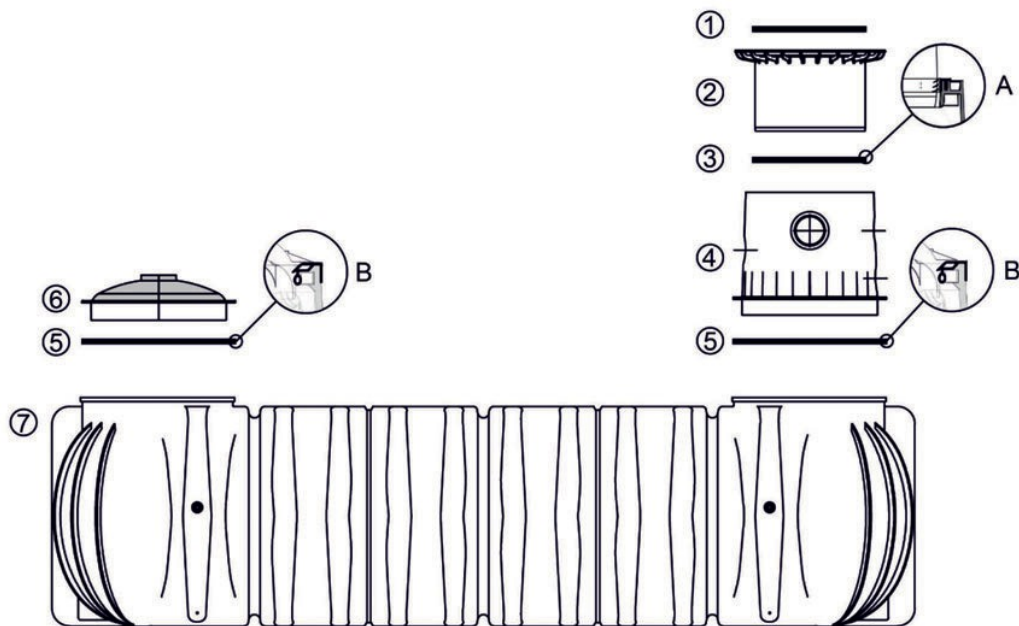
Tank	Weight	Length
7500 L*	390 kg	3600 mm
10000 L	460 kg	4900 mm
15000 L	710 kg	7500 mm
20000 L	890 kg	9405 mm
25000 L	1105 kg	11580 mm
30000 L	1355 kg	14265 mm
35000 L	1570 kg	16510 mm
40000 L	1750 kg	18430 mm
45000 L	2000 kg	21030 mm
50000 L	2180 kg	22935 mm
55000 L	2395 kg	25195 mm
60000 L	2645 kg	27795 mm
65000 L	2825 kg	29700 mm

*The 7500L tank only has one opening.

The tank must be vented, unless exempted by a relevant regulation, considering:

- All plumbing and venting pipework connections need to be performed as per requirements of Water Services Licensing Regulations of relevant state and the latest versions of AS/NZS 3500.2 and AS/NZS 3500.3.
- For special requirements please consult the local relevant authority.

4. Tank overview

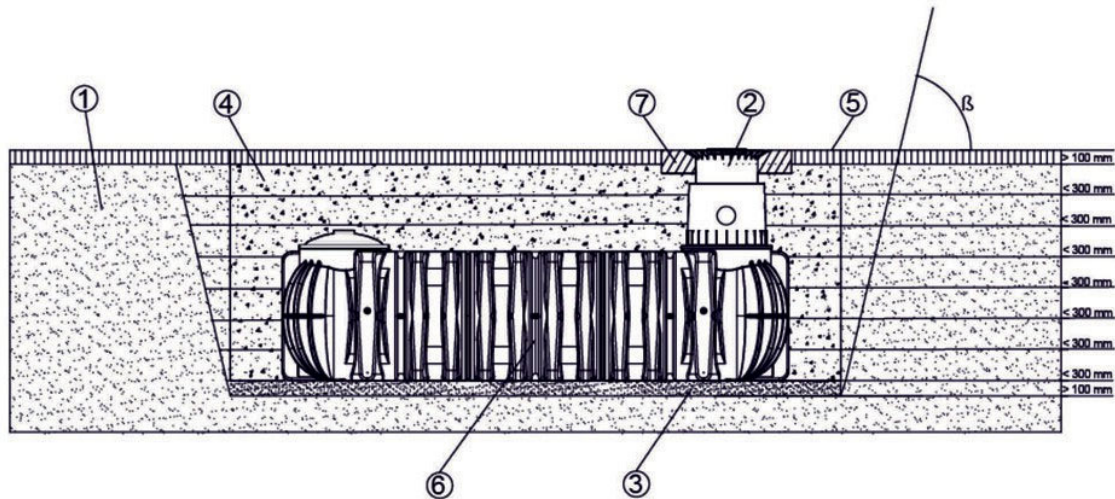


- ① Cover
- ② Telescopic shaft (can be inclined by 5°)
- ③ Profile seal
- ④ Tank dome (can be rotated by 360°)
- ⑤ Tank seal
- ⑥ Tank plug
- ⑦ PLATIN XL/XXL tank*

* The 7500L tank only has one opening.

5. Typical installation

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- ① Subsoil
- ② Telescopic shaft (can be inclined by 5°)
- ③ Compacted foundation
- ④ Surrounding (rounded gravel, maximum size 8/16 mm)
- ⑤ Covering layer
- ⑥ PLATIN XL/XXL tank
- ⑦ Concrete collar for trafficable installations

β --> slope according to site conditions and local codes and regulations

5.1. Site information

Under all circumstances, the following points must be clarified prior to installation:

- The structural suitability of the ground
- Maximum groundwater levels which occur and drainage capability of the subsoil
- Types of load which occur, e.g. traffic loads

An expert ground report should be requested from the local planning authority to determine the physical characteristics of the subsoil.

6. Installation conditions

6.1. Trench

To ensure that sufficient space is available for working, the base area of the trench must exceed the dimensions of the tank by > 500 mm on each side. The distance from solid constructions must be at least 1000 mm.

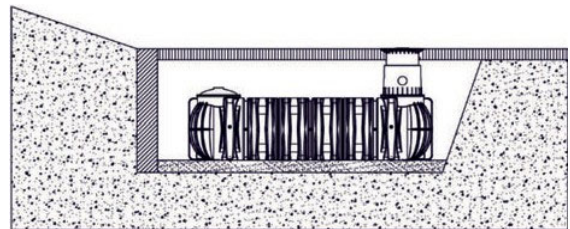
It is recommended that the excavation slope does not exceed 45 degrees. Shoring and other precautions may be required according to site conditions, site machinery, and depth of the excavation. Excavation faces may be required to be stabilised with horizontal benching. All works must comply with the WHS Act and relevant codes of practices of each State Government.

The soil must have suitable load bearing capacity for the tank - refer to the appointed Designer. The depth of the trench must be dimensioned so that the max. earth coverage above the tank is not exceeded. Water in the excavation should be managed via temporary sump and pumps for preventing excavation from becoming waterlogged.

A layer of compacted, round-aggregate gravel (size 8/16, thickness approx. 100 – 150 mm) is applied as the foundation.

6.2. Slope, embankment, etc.

On installations in the immediate vicinity (< 5 m) of a embankment, earthen mound, a retaining wall designed by an approved Structural Engineer must be installed to protect the tank from the soil pressure.

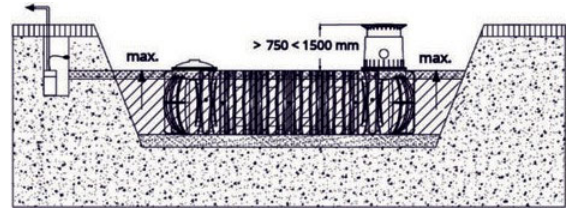


The wall must exceed the dimensions of the tank by at least 500 mm in all directions and must be located at least 1000 mm away from the tank.

6. Installation conditions

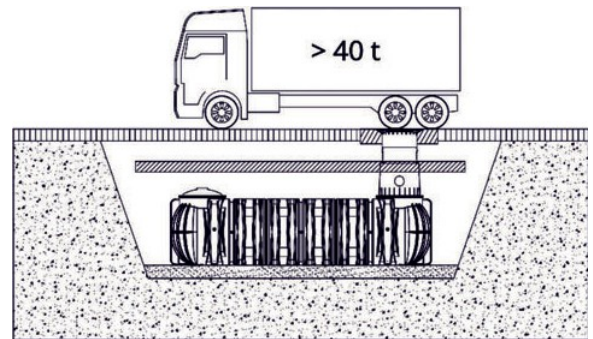
6.3. Groundwater and cohesive soils (e.g. clay soil)

In cohesive, clay soils or if it is anticipated that the tanks will be immersed deeper into the groundwater than is shown in the adjacent figure (shoulder of the tank: 1250mm), ground water management must be installed.



6.4. Installation for loads above 40 tonnes

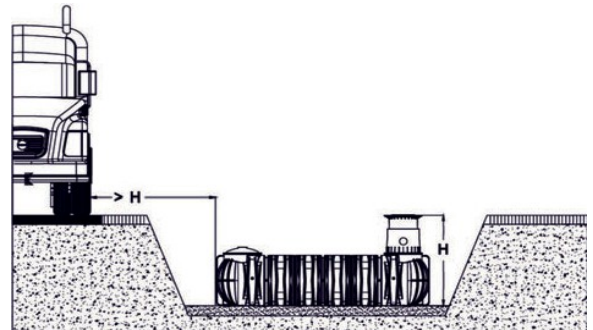
The tank can only be driven over by HGV of above 40 tonnes in conjunction with a self-supporting, steel reinforced concrete slab. To ensure that no additional forces or effects of HGV-bearing are transferred to the tank, the dimensions and strength of the concrete slab must be designed by a Structural Engineer



If you have any questions in this regard, please contact your GRAF-Team.

6.5. Installation adjacent to surfaces used by vehicles

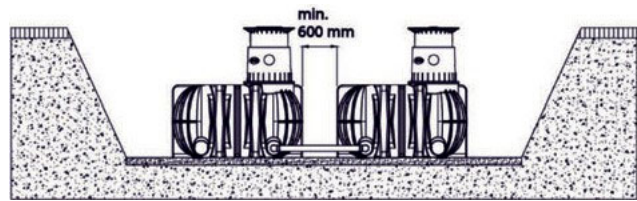
If the underground tanks are installed adjacent to surfaces which are used by vehicles weighing over 3.5T, the minimum distance away from these surfaces is at least the depth of the trench.



6. Installation conditions

6.6. Connection of several tanks

Two or more tanks are connected by means of GRAF special seals and basic pipes (to be provided at construction site).



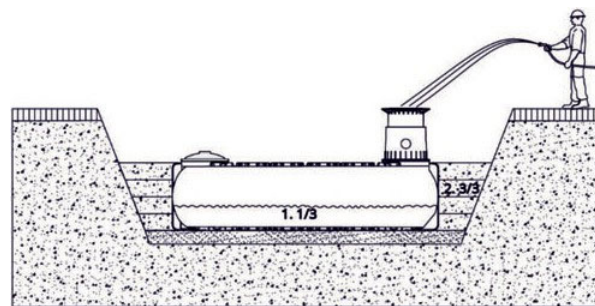
The apertures must be drilled to the corresponding size using only the GRAF special crown bit.

It must be ensured that the distance between the tanks is at least 600 mm. The pipes must project at least 200 mm into the tanks.

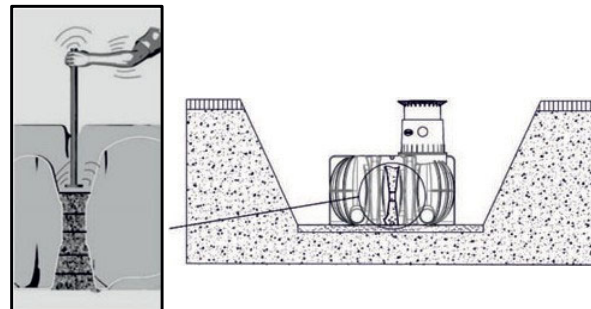
6.7. Insertion and filling

The tanks must be inserted, impact-free, into the prepared trench using suitable equipment. To avoid deformities, the tank is filled 1/3 with water before backfilling the tank surroundings.

The surrounding is backfilled with round gravel (max. aggregate size 8/ 16mm) in compacted layers of max. 300mm. Damage due to frost heave must be prevented in susceptible areas.



The individual layers, as well as the coned void shown, must be well-compacted (manual tamper). The surrounding towards the trench must be at least 500 mm wide.

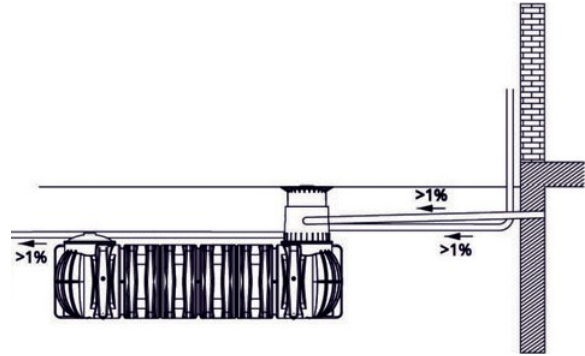


6. Installation conditions

6.8. Connections

All feed and overflow pipes must be routed with a decline of at least 1 % in the direction of flow (possible, subsequent settling must be taken into consideration in this case).

If the tank overflow is connected to a public network, it must be protected against backflow.



All suction, pressure and electrical lines must be connected in pipes connected to the tank with a decline, without bends if possible. If necessary, bends must be formed using 30° sections.

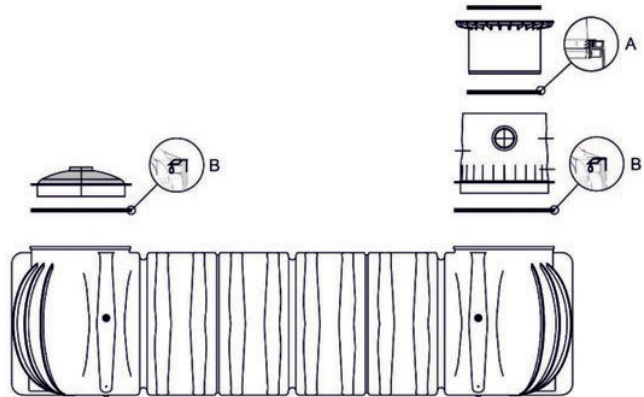
Important: The empty pipes must be connected to the tank **above** the maximum water level.

7. Installation and assembly

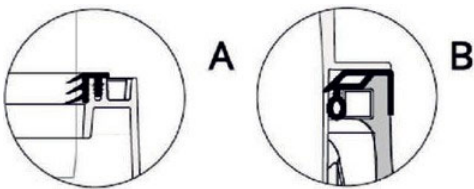
7.1. Assembling the tank dome

7.1.1. Fitting the tank dome

Before installation, the supplied seal is pushed between the tank and the tank dome onto the mounting profile of the tank neck "B". The tank dome is then aligned with the pipework and pushed into the tank neck as far as it will go.



It is essential to pay attention to the position of the seals!

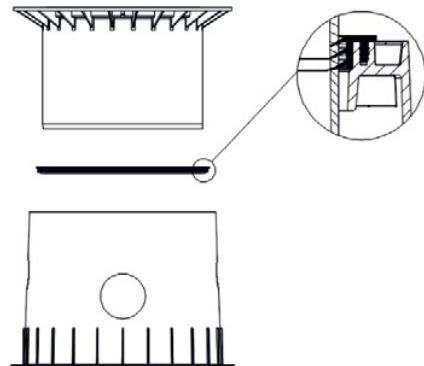


7.1.2. Assembling the telescopic shaft

The telescopic dome shaft enables height adjustments to the terrain surface.

For assembly, the profile seal (EPDM material) of the tank dome is generously rubbed with soft soap (do not use lubricants based on mineral oil, as these attack the seal).

The telescopic shaft is then also greased, inserted and levelled to the planned surface height.

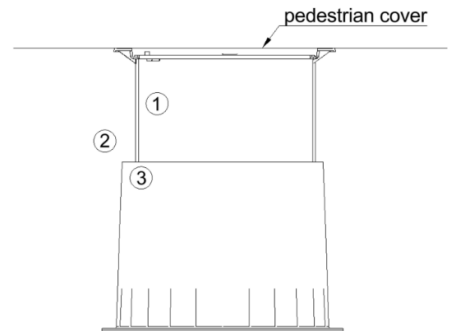


7. Installation and assembly

7.2. Assembling the lids

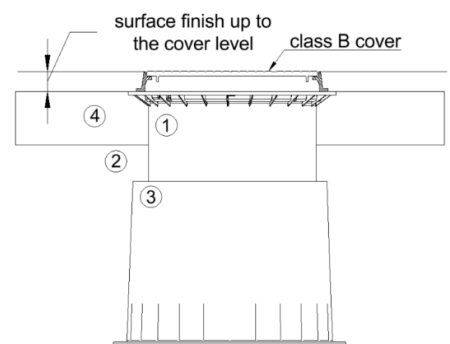
7.2.1. Cover installation for pedestrian loading

To prevent loads from being transferred to the tank, the telescope shaft ① is backfilled in layers (< 300 mm) with round gravel ② (max. aggregate size 8/16) and compacted evenly. Damage to the dome ③ or shaft must be avoided. Then place the cover in position, screw the cover lock shut with a hexagon spanner and tighten it so that it cannot be opened without tools.



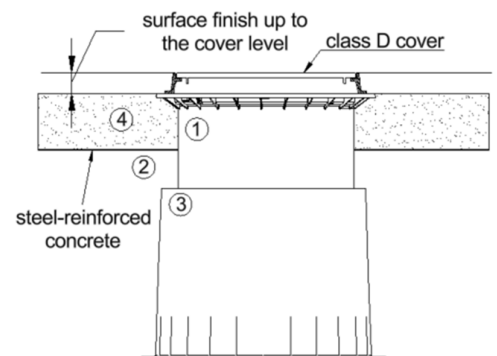
7.2.2. Cover installation for car loading (class B)

If the container is installed under car traffic areas, the telescopic shaft ① must be casted in concrete (concrete quality C20/25) in the collar area ④. The concrete collar must be at least 300 mm wide and approx. 200 mm high all around.



7.2.3. Cover installation for truck loading (class D)

For installation under HGV-bearing areas, the shaft ① is cast with steel reinforced concrete ④. The cast frame must have a bearing surface of approx. 1 m² so that the load forces cannot be transferred to the dome ③.



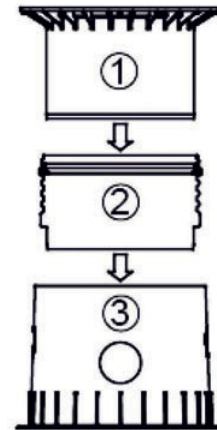
7. Installation and assembly

7.3. Assembling the extension riser

For deeper installations, GRAF extension riser must be used. To insert the extension riser into the tank dome, soft soap is needed. Into the highest groove of the extension the profile seal is inserted and greased generously. Afterwards, the telescopic shaft is installed with relevant lid as per previous section.

Earth-cover is maximum 1500 mm in trafficable areas.

- ① Telescopic shaft (can be inclined by 5°)
- ② Extension riser
- ③ Tank dome (can be rotated by 360°)



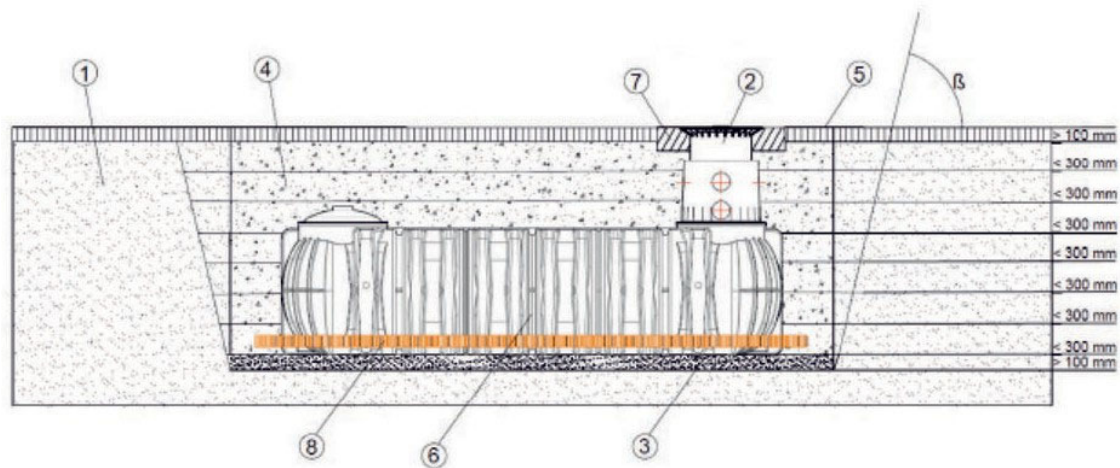
8. Infiltration tank

8. Infiltration Tank

8.1. Infiltration considerations

Platin XL/XXL tank is available to be used for the infiltration of rainwater at sites with sufficient infiltration capabilities. A suitably sized filter must be part of the system for seamless operation of the Platin XL/XXL Infiltration tank. Internal or external filters can be used. The filters must be sized correctly for the collection of dirt and coarse materials, and the overflow of the filters must by-pass Platin XL/XXL infiltration tank.

In order to ensure the calculated infiltration performance, make sure that there is sufficient working space. Therefore, the base area of the trench should exceed the dimensions of the tank on each side by at least 500 mm.



- ① Soil
- ② Telescopic shaft
- ③ Compacted base layer
- ④ Surround backfill
(round gravel, max. aggregate 8/16)
- ⑤ Covering layer
- ⑥ PLATIN XL/XXL infiltration tank
- ⑦ Concrete layer for driven-on areas
- ⑧ Point drainage for infiltration

B --> slope according to site conditions and local codes and regulations

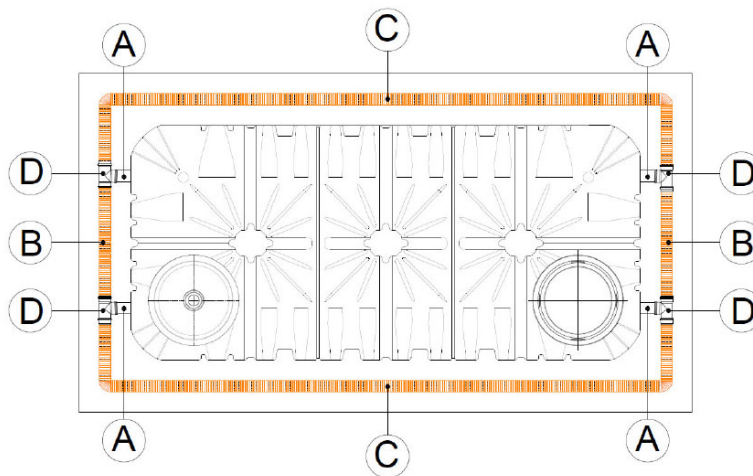
8. Infiltration tank

8.2. Preparing and assembling pipes

The outlet pipes ④ are inserted to 100 mm into the tank's DN150 seals. Then the T junctions ⑤ are pushed onto the outer ends of the outlet pipes ④. The T junctions ⑤ are connected to each other along the width of the tank by the perforated short pipes ⑥, and the system is completed by connecting the T junctions ⑤ along the length of the tank by the perforated long pipes ⑦.

The following sections are required for assembly:

- ④ 4x 0.5 m outlet pipes to be inserted to a maximum of 200 mm into the tank DN150 seals
- ⑥ 2x perforated short pipes
- ⑦ 2x perforated long pipes
- ⑤ 4x T junctions connecting tank outlets to the perforated pipes

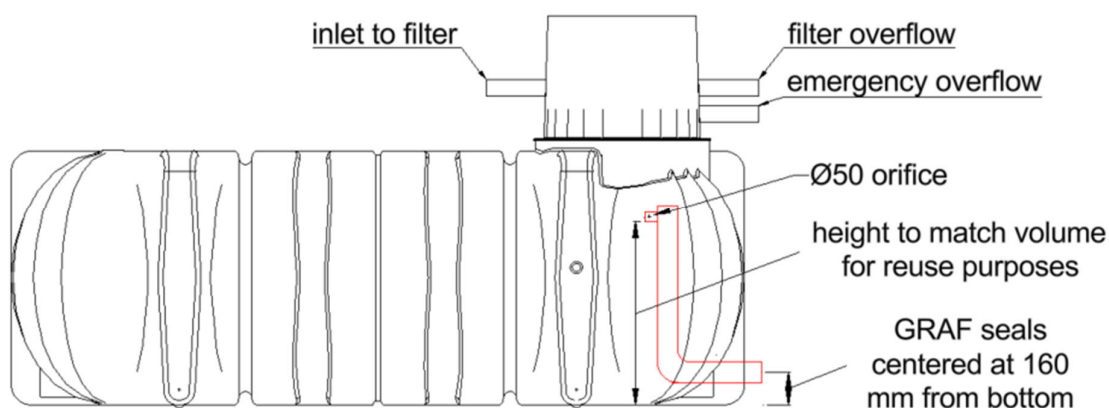


9. Detention and retention tanks

In detention tanks, the tank accumulates the water for slow release to the stormwater system. The detention volume is specified by the councils typically. An emergency overflow pipe should be installed. A submersible pump may be installed if the water can't reach the council pit by gravity.

In retention tanks, the tank accumulates the water for reuse. The retention volume is specified to match the volume required for reuse at each site. An emergency overflow pipe should be installed. A suitably sized filter must be part of the system, and the overflow of the filters must by-pass the tank. A submersible pump may be installed for rainwater reuse at the property through a rain-to-main system.

In most cases, a combined system is required. The tank is sized to meet the detention volume and the retention volume. The height of the internal pipework is adjusted on site to match the retention volume (demand for reuse purposes). The detention volume (volume above the orifice) is released by the pipework connected to the tank through GRAF seals centred at 160mm from the bottom of the tank.



Please consult the volumetric table in the next section to select tank size and the height of the orifice.

10. Inspection and servicing

The tank should be inspected every 3 months within the first year of installation to check for leaks, cleanliness and stability. Regular inspections are recommended to prolong service life.

The entire system should be serviced at intervals of approx. 5 years. Servicing should be carried out as follows:

- Drain the tank completely
- Clean surfaces and internal parts with water
- Remove all dirt from the tank
- Inspect internal parts that might be present

Servicing intervals may change due to the tank use and application, please liaise with the relevant local authority. In rainwater applications, the installed filters might require service every 6 months or less, depending on system design.