



For proper and safe use, follow the instructions and notes in this document.

- Read the installation instructions carefully before installation, assembly and commissioning.
 - Keep for future reference.
-

Instructions for installation/assembly/ and maintenance
Valid for PLATIN XL/XXL Rainwater Underground Tank

Item no. 963370
Date of issue 17.12.2025
Original operating instructions
Original language: German

Order No.:

PLATIN XL/XXL 10.000 - 65.000 l

PLATIN XL infiltration tank

10000 L: DN 110 390016 (390822+371014+371065)

10000 L: DN 160 390012

10000 L: DN 160 390006 (390822+371018+371065)

15000 L: DN 160 390013

15000 L: DN 110 390017 (390823+371014+371065)

15000 L: DN 160 390007 (390823+371018+371065)

20000 L: DN 160 391000 (391810+371018+371065)

25000 L: DN 160 391001 (391811+371018+371065)

30000 L: DN 160 391002 (391812+371018+371065)

35000 L: DN 160 391003 (391813+371018+371065)

40000 L: DN 160 391004 (391814+371018+371065)

45000 L: DN 160 391005 (391815+371018+371065)

50000 L: DN 160 391006 (391816+371018+371065)

55000 L: DN 160 391007 (391817+371018+371065)

60000 L: DN 160 391008 (391818+371018+371065)

65000 L: DN 160 391009 (391819+371018+371065)

Otto Graf GmbH Kunststoffzeugnisse
Carl-Zeiss-Straße 2 – 6, 79331 Teningen
Deutschland

Tel. +49 7641 589-0
mail@graf.info www.graf.info

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1 General notes

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

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

Missing instructions can be downloaded on www.graf.info or can be requested from GRAF.

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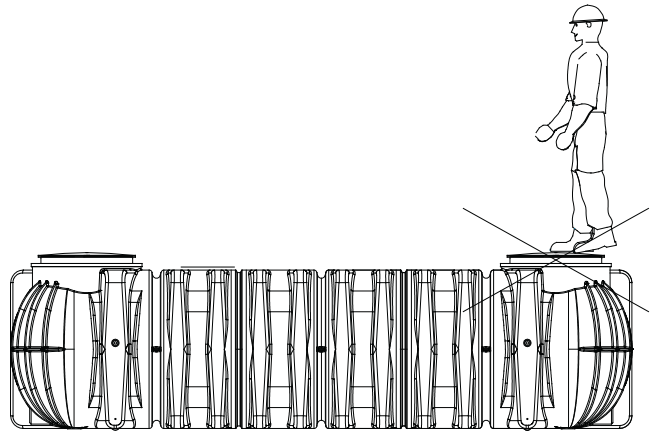
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2 Security

The relevant accident prevention regulations according to BGV C22 must be observed during all work. Particularly when walking on the tanks, a second person is required to secure the tank.

The relevant regulations and standards must additionally be taken into consideration during installation, assembly, servicing, repair, etc. Relevant notes can be found in the corresponding sections of these instructions.

During all work on the system or parts of the system, the entire system must always be rendered inoperable and secured to prevent unauthorised reactivation:



Except in the event of work carried out in the tank, the cover of the tank must always be kept sealed, as this otherwise constitutes a maximum risk of accident. The rain protection installed on delivery is merely transportation packaging. It cannot be walked on and is not child-proof; it must be replaced with a suitable cover immediately following delivery (telescopic dome shaft with corresponding cover)!

Only original GRAF covers or covers approved in writing by GRAF must be used.

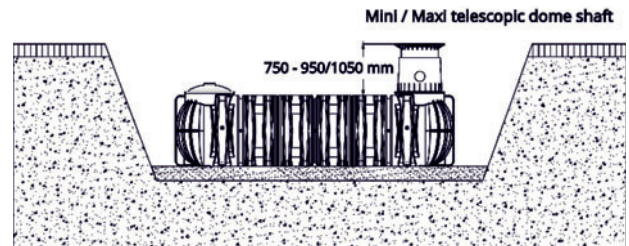
GRAF offers an extensive range of accessories, all of which are designed to match each other, and which can be extended to form complete systems. The use of accessories that have not been approved by GRAF results in the exclusion of the warranty/guarantee.

2.1 Identification obligation

All service water pipes and outlets must be identified in writing with the words **"Not drinking water"** or in the form of images (DIN 1988 Part 2, Para. 3.3.2.) in order to avoid inadvertent connection with the drinking water mains even after a number of years. Mix-ups, e.g. by children, may still occur even in the case of correct identification. All service water extraction points must therefore be installed with valves with **child-proof locks**.

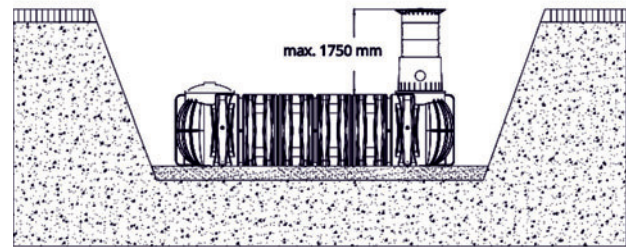
3 Installation conditions

Coverage heights with telescopic dome shaft in green areas.

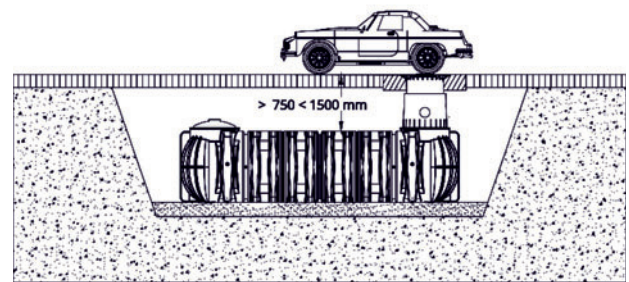


Maximum coverage heights with extension and telescopic dome shaft max. 1750 mm.

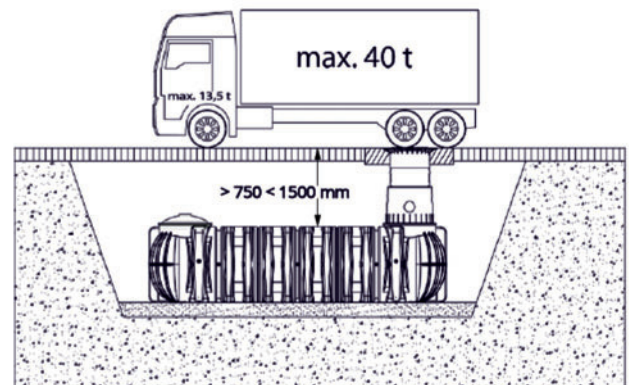
(in green areas only – not under passable areas)



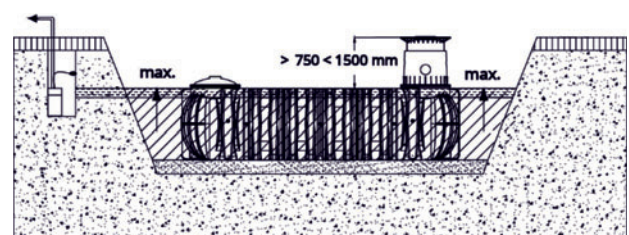
Cover heights with telescopic dome shaft for car traffic/telescopic dome shaft with cast iron in areas with car traffic (load up to 3.5 tonnes with axle load of 3.5 t).



Cover heights with HGV-bearing telescopic dome shaft Universal, with cover class D – (provided by customer), in areas driven over by HGVs (Load up to max. 40 t with an axle load of max. 13.5 t).

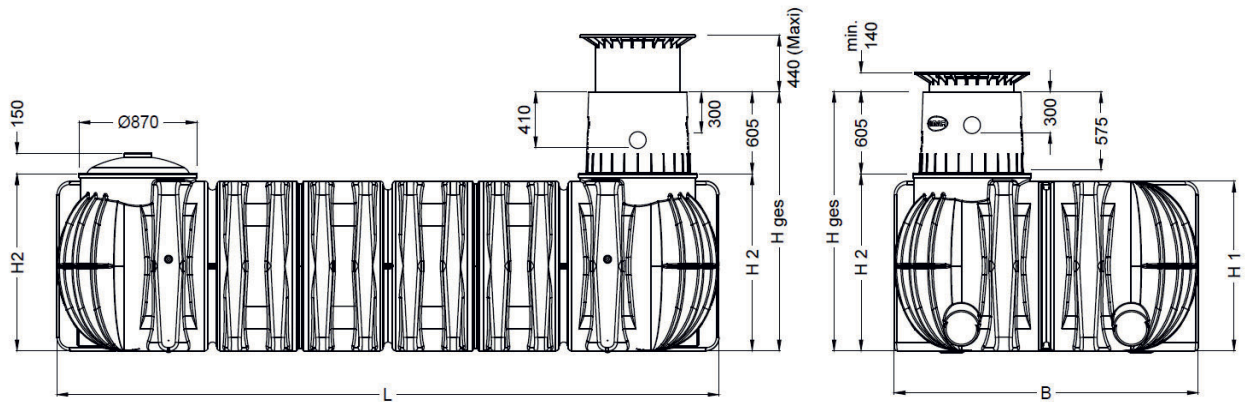


Coverage heights on installation in groundwater – the hatched area specifies the permissible immersion depth for the tank.

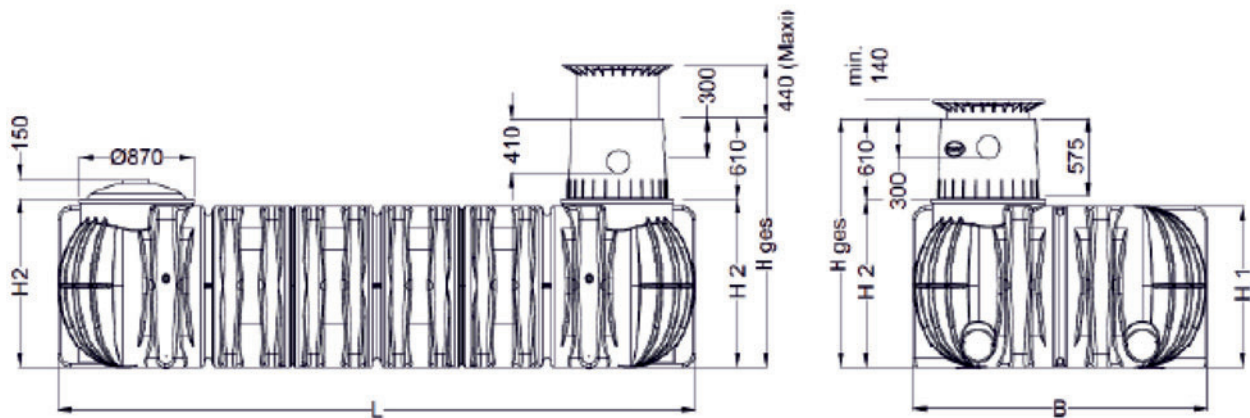


4 Technical data

4.1 Technical data PLATIN XL connection option DN 110



4.2 Technical data PLATIN XL/XXL connection option DN 160



4.3 Overview tanks PLATIN XL/XXL

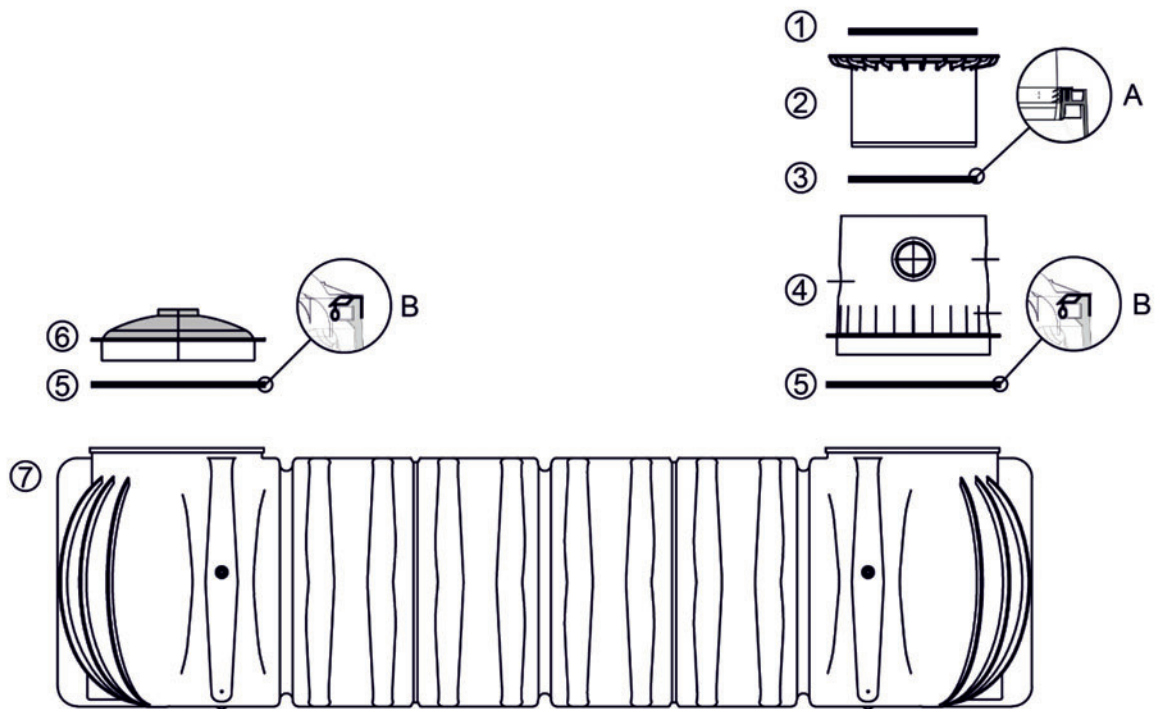
Tank	10.000 l	15.000 l
Weight	460 kg	710 kg
L (length)	4900 mm	7500 mm
W (width)	2250 mm	2250 mm
H1 (height)	1250 mm	1250 mm
H2 (height)	1300 mm	1300 mm
Htot*	1910 mm	1910 mm

Htot* = total height

Tank	20.000 l	25.000 l	30.000 l	35.000 l	40.000 l
Weight	890 kg	1105 kg	1355 kg	1570 kg	1750 kg
L (length)	9405 mm	11580 mm	14265 mm	16510 mm	18430 mm
W (width)	2250 mm	2250 mm	2250 mm	2250 mm	2250 mm
H1 (height)	1250 mm	1250 mm	1250 mm	1250 mm	1250 mm
H2 (height)	1300 mm	1300 mm	1300 mm	1300 mm	1300 mm
Htot*	1910 mm	1910 mm	1910 mm	1910 mm	1910 mm

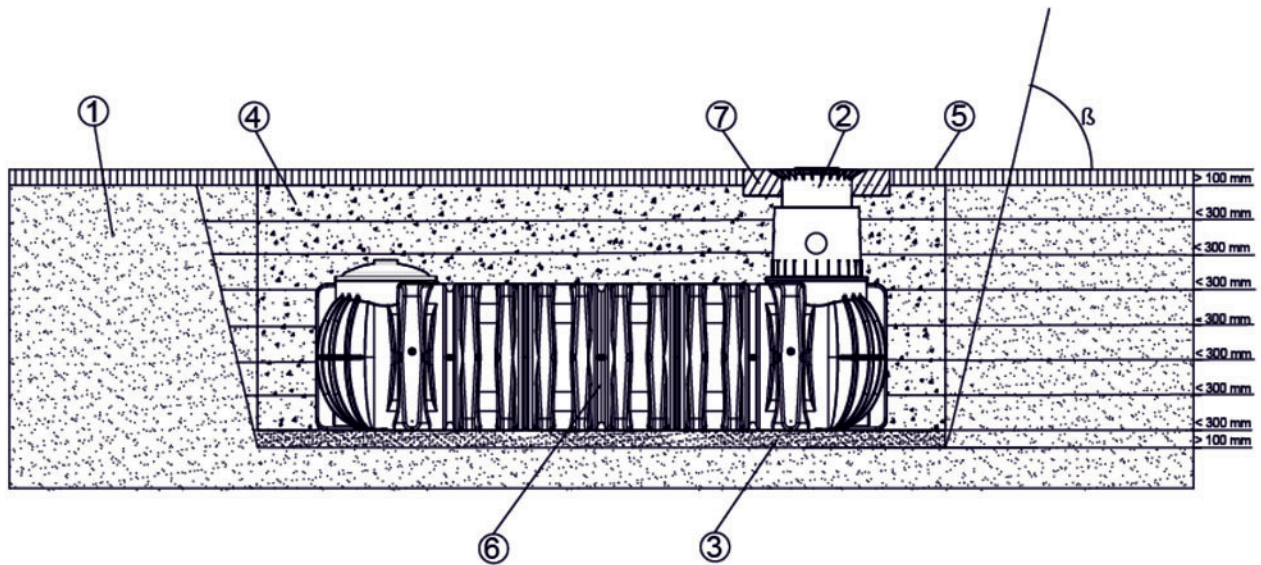
Tank	45.000 l	50.000 l	55.000 l	60.000 l	65.000 l
Weight	2000 kg	2180 kg	2395 kg	2645 kg	2825 kg
L (length)	21030 mm	22935 mm	25195 mm	27795 mm	29700 mm
W (width)	2250 mm	2250 mm	2250 mm	2250 mm	2250 mm
H1 (height)	1250 mm	1250 mm	1250 mm	1250 mm	1250 mm
H2 (height)	1300 mm	1300 mm	1300 mm	1300 mm	1300 mm
Htot*	1910 mm	1910 mm	1910 mm	1910 mm	1910 mm

5 Tank structure



- ① Cover (pedestrian and vehicle traffic, lorry traffic areas without cover)
- ② Telescopic domshaft (can be inclined by 5°)
- ③ Profile seal (A): tankdom – teleskop
- ④ Tank dom (can be rotated by 360°)
- ⑤ Tank – tank dome seal (B)
- ⑥ Tank dom sealing plug
- ⑦ PLATIN XL/XXL tank

6 Installation and assembly



- ① Subsoil
- ② Telescopic dome shaft
- ③ Compacted foundation (round-grained gravel, max. grain size 8/16)
- ④ Surrounding (round-grained gravel, max. grain size 8/16)
- ⑤ Covering layer
- ⑥ PLATIN XL/XXL Rainwater Underground Tank
- ⑦ Concrete layer for passable surfaces

β --> DIN 4124 from 1250 mm depth of the trench

6.1 Construction site

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

- The structural suitability of the ground according to DIN 18196
- 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.

6.2 Trench

To ensure that sufficient space is available for working, the base area of the trench must exceed the dimensions of the tank by > 100 mm on each side; the distance from solid constructions must be at least 1000 mm.

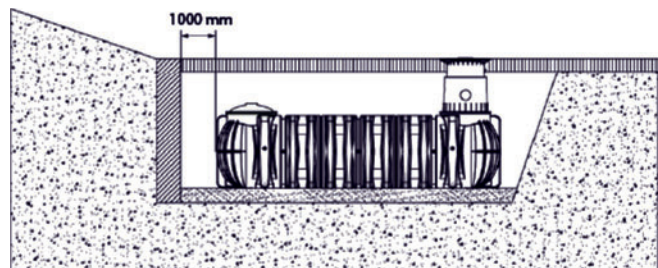
If the depth of the trench is > 1250 mm an embankment must be designed according to DIN 4124. The construction site must be horizontal and plane and must guarantee sufficient load-bearing capacity.

The depth of the trench must be dimensioned so that the max. earth coverage (see section 3 – installation conditions) above the tank is not exceeded. To use the system throughout the entire year, it is necessary to install the tank and those parts of the system which conduct water in the frost-free area. The frost-free depth is usually approx. 600 mm – 800 mm; precise information in this regard can be obtained from the responsible authority.

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

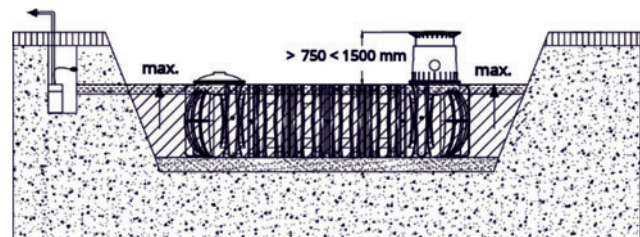
6.2.1 Slope, embankment, etc.

On installation of the tank in the immediate vicinity (< 5 m) of a slope, earthen mound or slope, a statically calculated supporting wall must be erected to absorb 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.



6.2.2 Groundwater and cohesive (water-impermeable) soils (e.g. clay soil)

If it is anticipated that the tanks will be immersed deeper into the groundwater than is shown in the adjacent figure, sufficient dissipation must be ensured. (See table for max. immersion depth). Dissipation of the drainage water (e.g. via an annular drainage system) is recommended in the case of cohesive, water-impermeable soils.

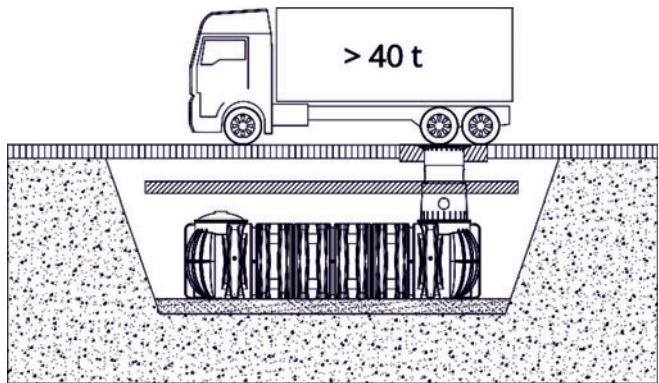


Tank	10.000 l - 65.000 l
max. immersion depth	1250 mm

6.2.3 Installation below HGV-bearing surfaces

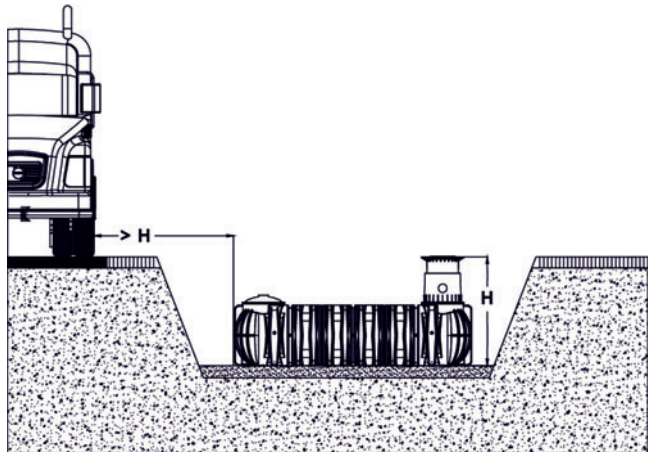
Over 40 t, the shaft can only be driven over with HGV in conjunction with a self-supporting, iron-reinforced concrete plate. To ensure that no additional forces or effects of HGV-bearing are transferred to the tanks, the dimensions and strength of the concrete plate must be statically calculated.

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



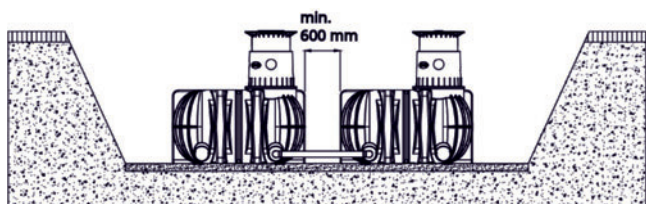
6.2.4 Installation adjacent to surfaces used by vehicles

If the underground tanks are installed adjacent to surfaces which are used by heavy vehicles weighing over 3,5 t, the minimum distance away from these surfaces is at least the depth of the trench.



6.2.5 Connection of several tanks

Two or more tanks are connected via the assembly surfaces 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.

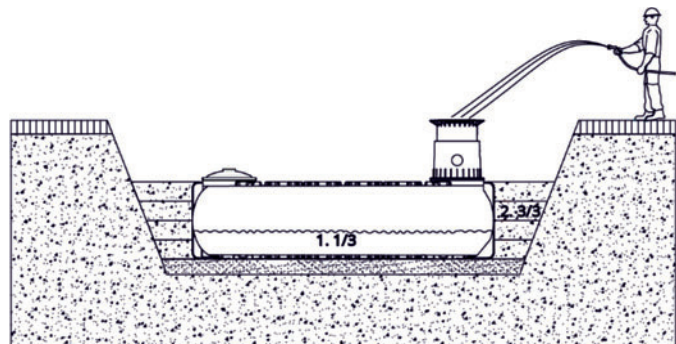
It must be ensured that the distance between the tanks is at least 600 mm. The pipes must project at least 200 mm into the tanks.

6.3 Insertion and filling

The tanks must be inserted, impact-free, into the prepared trench using suitable equipment.

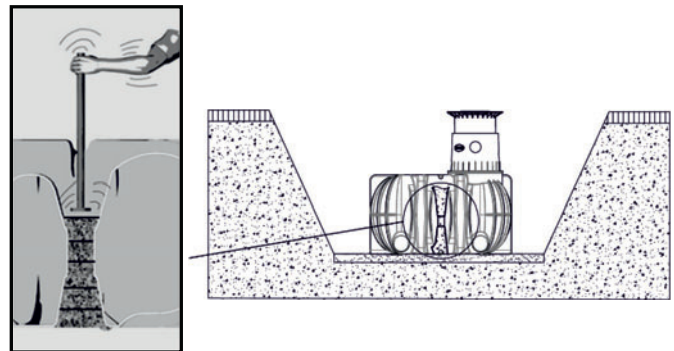
To avoid deformities, the tank is filled 1/3 with water before filling in the tank surrounding.

Afterwards the surrounding (roundgrain gravel, max. grain size 8/ 16) is then filled in layers of max. 300 mm steps and is compacted.



The individual layers as well as the medial support column **must be well-compacted (manual tamper)**.

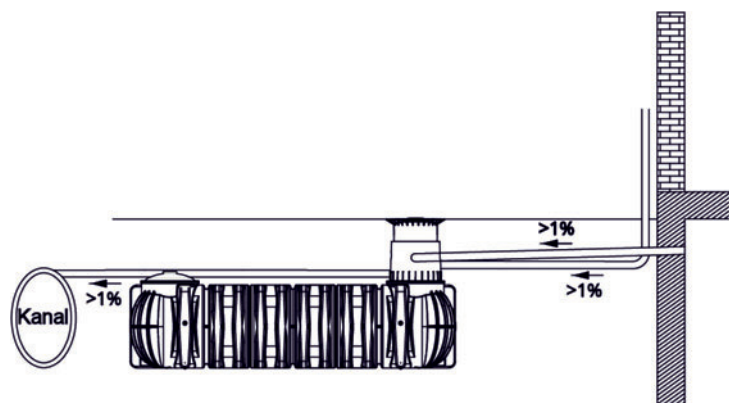
Damage to the tank must be avoided during compaction. Mechanical compaction machines must not be used under any circumstances. The surrounding towards the trench must be at least 100 mm wide.



6.4 Routing 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 sewer, this must be protected against reflux by means of a liftingstation (mixed sewer) or reflux seal (pure rainwater sewer) according to DIN 1986.



All suction, pressure and control lines must be routed in an empty pipe, which must be routed as straight as possible, without bending, to the tank with a decline. Necessary bends must be formed using 30° moulded sections.

Important: The empty pipe must be connected to an aperture **above** the maximum water level.

7 Assembling the tank dome and telescopic dome shaft

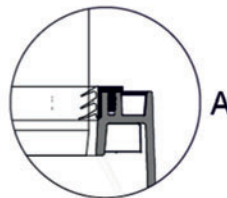
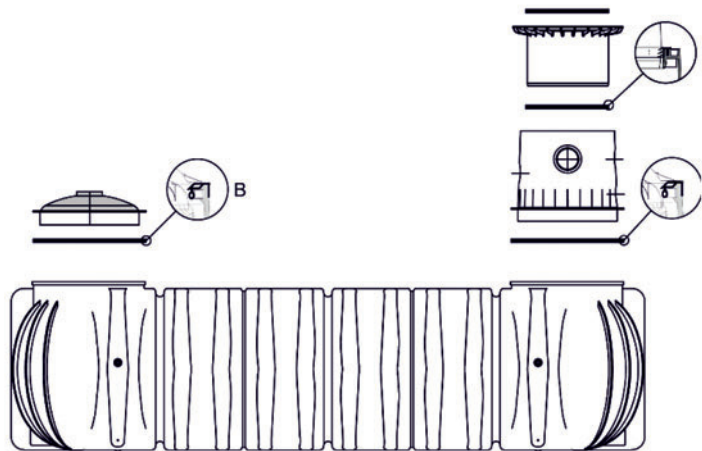
7.1 Fitting the tank dome

For assembly, slide the supplied seal between the tank and tank dome onto the mounting profile of the tank neck “B”.

Before assembly the tank dome, generously grease soft soap (do not use mineral oil-based lubricants, as these will attack the seal) onto the profile seal (material EPDM) of the tank dome.

Then grease the tank dome as well, align it with the pipes, and push it into the tank neck as far as possible.

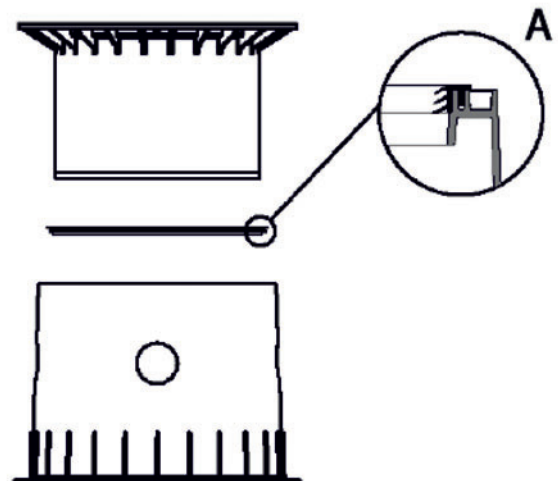
It is essential to ensure that the seals are seated correctly!



7.2 Assembling the telescopic dome shaft

The telescopic dome shaft enables infinite adaptation of the tank to given site surfaces with earth coverage of between 750 mm and 950 mm (Mini telescopic dome shaft) or 750 mm and 1050 mm (Maxi telescopic dome shaft).

For assembly purposes, the enclosed profile seal “A” (material EPDM) is inserted into the tank dome's sealing groove and is coated generously with soft soap

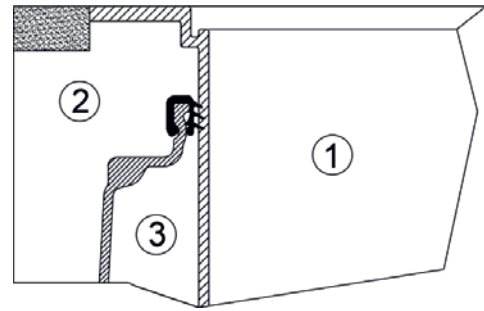


Do not use mineral oil-based lubricants, as these attack the seal.

The telescope is then greased, inserted and aligned with the surface of the site.

7.3 Telescopic dome shaft Maxi/Mini, pedestrian loading incl. cover

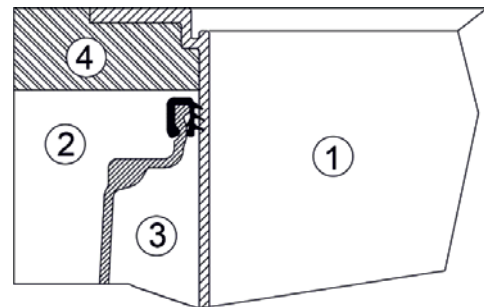
To prevent loads from being transferred to the tank, the telescope ① is filled in layers (< 300 mm) with round grain gravel ② (max. grain size 8/16) and compacted evenly. Damage to the container tank dome ③ or telescope must be avoided.



Then place the plastic manhole cover in position, screw the cover lock shut with a hexagon spanner and tighten it so that it cannot be opened without tools.

7.4 Telescopic dome shaft for vehicle loading with plastic cover (class B125)

If the container is installed under car traffic areas, the telescopic ① must be underlaid with concrete ④ (concrete quality C20/25) in the collar area. The concrete layer to be filled must be at least 400 mm wide and at least 200 mm high all round.

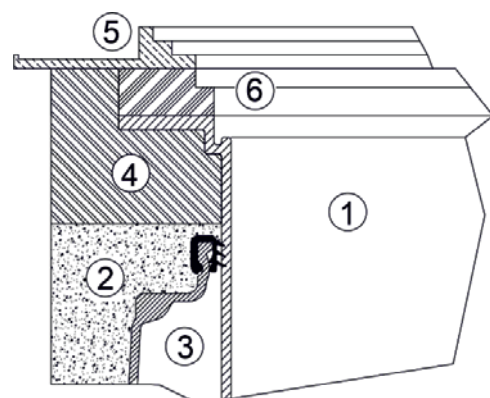


Then place the plastic manhole cover in position, screw the cover lock shut with a hexagon spanner and tighten it so that it cannot be opened without tools.

7.5 Universal telescopic dome shaft, accessible, without cover (D400)

For installation under lorry traffic areas, the telescope ① is shimmed as described in point 7.4 above.

The concrete cast frame ⑤, or alternatively the concrete rings ⑥ are to be provided and installed by the customer. These are required to distribute the load on the cover.



The concrete cast frame must have a bearing surface of at least 400 mm wide and at least 200 mm high, so that the load forces cannot be transferred to the manhole casing ③ under any circumstances. (cover to be provided on site).

7.6 Load distribution plate for traffic loads

For traffic loads according to E4 (DIN 19901), load distribution plates made of reinforced concrete are required, which can be assigned a load-bearing effect.

For more information, please contact GRAF! (

8 Assembling the extension

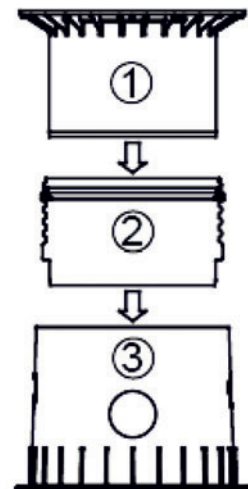
If an intermediate piece is required for larger earth coverings, it is inserted into the tank dome with the aid of soft soap.

Do not use mineral oil-based lubricants, as these will attack the seal.

Insert the profile seal into the top groove of the spacer and grease it generously.

max. Earth-cover: 1750 mm ((in the area accessible to pedestrians)

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



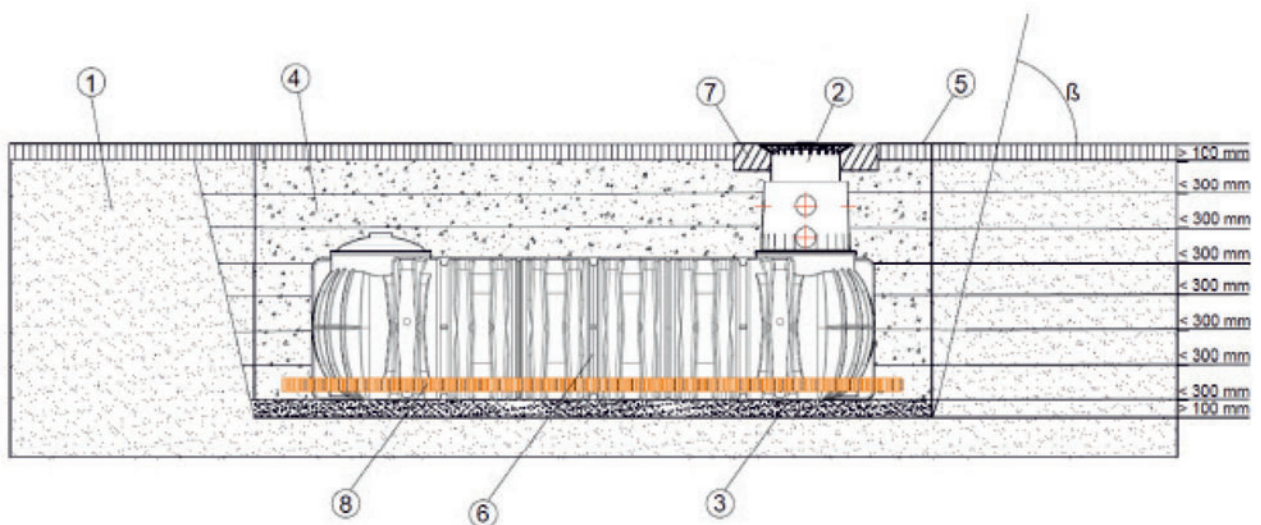
9 PLATIN XXL Infiltration Tank

The PLATIN XL/XXL tank is also available for use in the infiltration of rainwater. The GRAF team would be pleased to help you to determine the correct size for your building project. Pre-filtering of the rainwater with a suitably sized filter is required for seamless operation of the PLATIN XL/XXL infiltration tank. For this purpose, external pre-filters are available in the GRAF product range for cleaning and filtering rainwater up to inlet and outlet dimensions of DN 315. Internal filters with connecting dimensions of up to a maximum of DN 160 are also available.

Both internal and external pre-filters can be used. However, the filters must be sized correctly for the collection of dirt and coarse materials, and the emergency overflows of the filters must by-pass PLATIN XL/XXL infiltration tank.

9.1 Installation and assembly

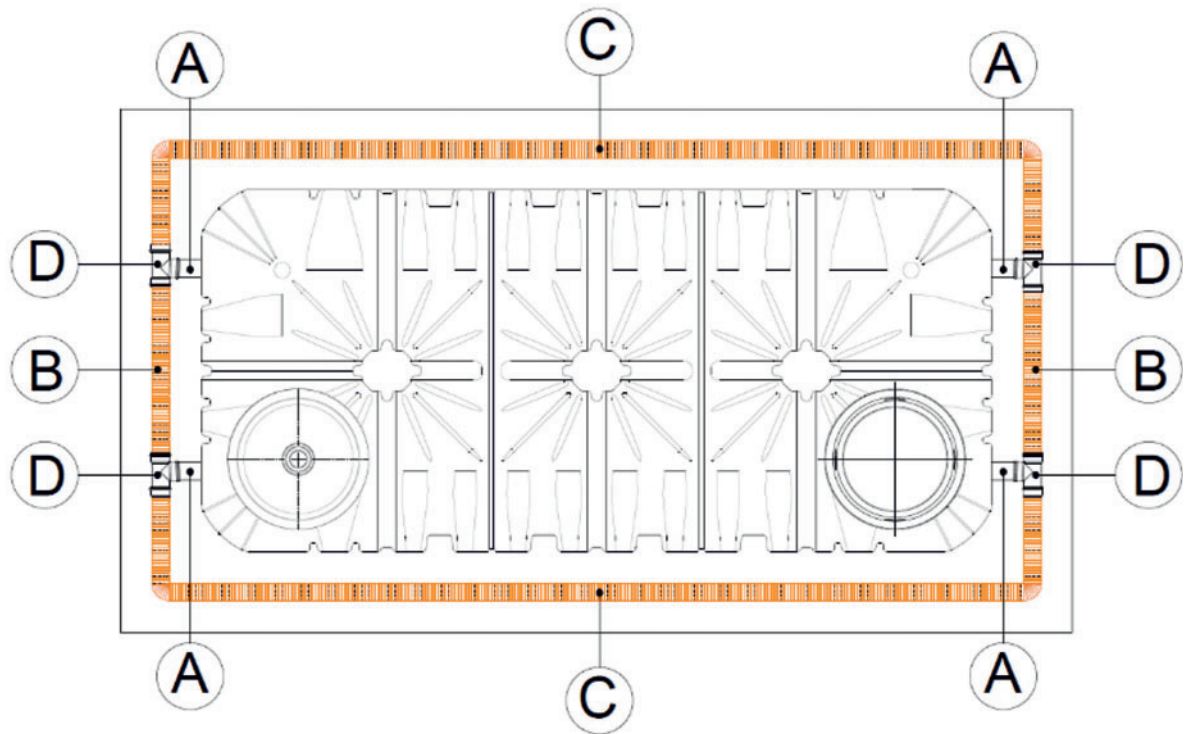
Note: In order to ensure the calculated infiltration performance, make sure that there is sufficient working space. Therefore, the base area of the trench should exceed the dimensions of the tank on each side



- | | |
|---|---|
| ① Soil | ⑤ Covering layer |
| ② Telescopic dome shaft | ⑥ PLATIN XL/XXL infiltration tank |
| ③ Compacted base layer | ⑦ Concrete layer for driven-on areas |
| ④ Surround (round gravel, max. grain
8/16) | ⑧ Point drainage for infiltration |
| | β --> DIN 4124 from trench depth of 1250 mm |

9.2 Preparing and shortening the drainage pipes

The channel drainage that is required must be cut to size from the supplied roll of drainage pipe on site. The following sections are required for assembly:



- Ⓐ 4x 0.5 m connection sewer pipes (pre-installed)
- Ⓑ 2x 1.2 m connecting piece, lateral (drainage pipe must be cut to size)
- Ⓒ 2x longitudinal section, long side (drainage pipe must be cut to size)
- Ⓓ 4x drainage branches (included in scope of delivery)

The scope of delivery also includes four drainage branches Ⓓ for connecting the surrounding point drainage to the front end. First the four connections to the slide-in unit Ⓐ and the two lateral connections Ⓑ are cut from the supplied roll of drainage pipe. The remainder of the roll is cut into two longitudinal sections of equal length Ⓒ.

The longitudinal pieces which are produced Ⓒ are now placed into the trench along the long side on the right and left of the PLATIN XXL infiltration tank.

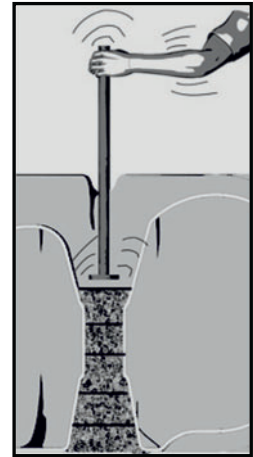
9.3 Assembling the drainage accessories

The PLATIN XL/XXL infiltration tank is supplied with four inserted DN 160 special seals on the lower front-end. The drainage branches ④ are pushed onto the outer ends of the connecting sewer pipes ①. Two of the four drainage branches ④ are connected to each other laterally using the prepared connection ②.

Note that the connectors are inserted to a maximum of 100 mm. The ends of the laid longitudinal sections ③ are then also inserted into the drainage branches ④.

9.4 Filling

Side filling must be carried out using permeable and granular material (e.g. round-grained gravel with max. grain size of 8/16). Filling must take place in small steps, and particularly in the vicinity of the centre support columns the filling material must be properly compacted (see figure with hand tamper). Be careful to avoid damaging the tank when compacting. Mechanical compacting machines must not be used under any circumstances.



9.5 Laying connections and fitting the cover

The installation steps for laying the connections which are needed can be found in chapter 6.4. The installation of the tank dome, intermediate sections and the various covers is also described in chapters 7 & 8.

10 Inspection & servicing

To ensure proper functioning and service life of the tank, the inspection, maintenance and servicing work described below must be carried out regularly.

- Read and follow the instructions described below.
- A second person is required for safety reasons, especially when emptying and entering the tanks.

10.1 Maintenance schedule

In addition to other factors, proper functioning depends largely on regular inspection and maintenance.

The intervals specified below are based on the intended use of the tank as a rainwater storage tank with an inlet filter, under average precipitation and particle input. The frequency of inspection and maintenance work, as well as any additional work that may be necessary, must be adapted to the respective operating and weather conditions.

Task	Activities	Time interval
Inspect tank (see section 10.2.1)	<ul style="list-style-type: none"> - Check the stability of the tank - Check the tank for leaks - Check cleanliness of tank, built-in parts and water 	Every 3 months

An additional check must be carried out if earthworks have been carried out near the tank.



Attention

The maintenance intervals and scope for waste water and rainwater cleaning differ.

It is necessary to follow the maintenance documents provided for this purpose.

10.2 Maintenance work

10.2.1 Tank inspection

- To inspect the tank, remove the manhole cover from the telescopic dome shaft.

In order to identify possible malfunctions or problems and take any necessary measures, the checks listed in the following table must be carried out regularly.

Check step	Test procedure	Test result and measures
Check stability	Check the cross-section of the tank dome and the dome opening for deformation (visual inspection).	Circular shape: <ul style="list-style-type: none"> - No impairment of stability
		Oval shape: <ul style="list-style-type: none"> - Stability is impaired. Contact Graf for possible measures.
Visual inspection of the surrounding area	Check the ground around the tank for signs of erosion.	Slight changes to the ground: <ul style="list-style-type: none"> - No impairment of stability
		Significant ground changes: (Significant subsidence, cavities or depressions in the area surrounding the tank) <ul style="list-style-type: none"> - Take the tank out of service immediately until the cause has been clarified. - Check for possible damage to the tank system (leak test, check for leaks).
Check for leaks	Check the fill level in the tank	The water level corresponds to the amount of precipitation and withdrawal: <ul style="list-style-type: none"> - The tank is leak-proof.
		The tank is empty, or the water level is significantly too low: <ul style="list-style-type: none"> - Check the inlets and filters for damage or blockages. - If necessary, empty the tank completely and check for damage. Contact Graf for possible measures.

10.2.2 Cleaning the tank

- To clean the tank, remove the manhole cover from the telescopic dome shaft and remove any filters.

Simple cleaning

1. If only a layer of sediment (> 10 cm) has accumulated, remove the sediment using a dirty water pump.
2. Reinstall the existing filters.
3. Securely close the tank cover with the manhole cover.

Thorough cleaning

If the tank is heavily soiled, the tank and all built-in parts must be thoroughly cleaned.

Two people must always enter the tank for thorough cleaning!

- Clean with water only. Do not use cleaning agents.
- Do not use metal tools or brushes.

Perform thorough cleaning

1. Empty the tank completely using a dirty water pump.
2. Climb into the tank using a ladder.
3. A safety officer must remain positioned at the entrance throughout the entire time you are in the tank!
4. Scoop the sediment layer at the bottom into a bucket using a hand shovel and remove it from the tank.
5. Thoroughly clean the inside surfaces of the tank and all built-in parts with water, a brush and a cloth. Rinse with clean water.
6. Flush the inlets and outlets with clean water using a hose.
7. Remove all contaminants and dirty water from the tank.
8. Once cleaning is complete, check that all built-in parts are securely fastened.
9. Leave the tank and remove the ladder.
10. Refit any existing filters.
11. Securely close the tank cover with the manhole cover.

11 Decommissioning & disposal

Note: At the end of its service life, the tank must be decommissioned and disposed of in accordance with local regulations. Check with your local authorities and make sure you comply with all legal requirements.

For disposal, completely dismantle the tank and separate the components by material type. Dispose of the materials separately for recycling in accordance with local regulations.