Assembly and Installation Instructions
GRAF SuperCompact

2,000l
3,000l
4,000l
5,000l
8,000l
10,000l

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 Australia. Missing instructions must be requested from us immediately.

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

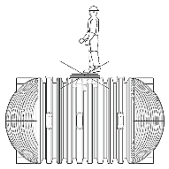
Missing instructions can be downloaded on https://www.graf.info/en-au/ or can be requested from GRAF Australia.

Table of Contents

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. The work must be performed by a licensed plumber and a second person should be present for safety reasons.

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.



Do not walk on the tank and 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 (dome, telescopic shaft, and respective lid option).

The tank cover must remain closed 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. The tank must be lifted completely empty just with the rain/dust protection cover. GRAF provides the sling to be used for unloading. The sling is supplied in a length that allows the tanks to be around 1.5m away from lifting hook. Please ensure the sling is fed through a rib so the tank is securely lifted.

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

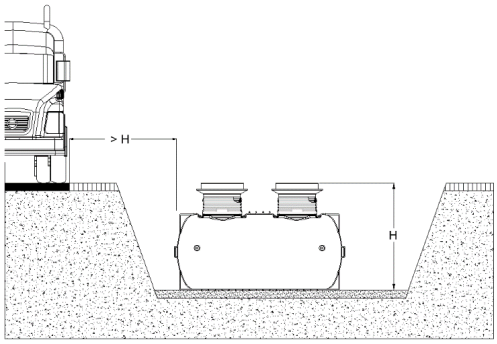
GRAF offers a wide range of accessory parts which are precisely coordinated and can be used to complete systems. The use of different accessory parts can lead to impact the functionality of the system, and to void liability for consequential damages.

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 provide accessibility for cleaning vehicles and ensure correct operation.

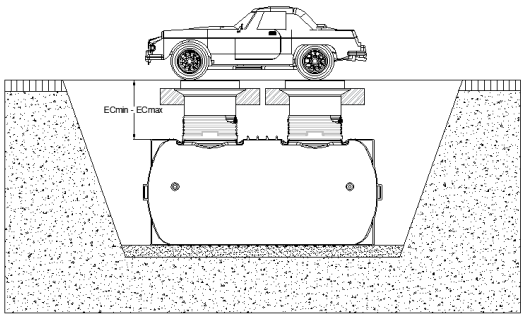
Please consult relevant authority prior to installation.

2. Installation conditions

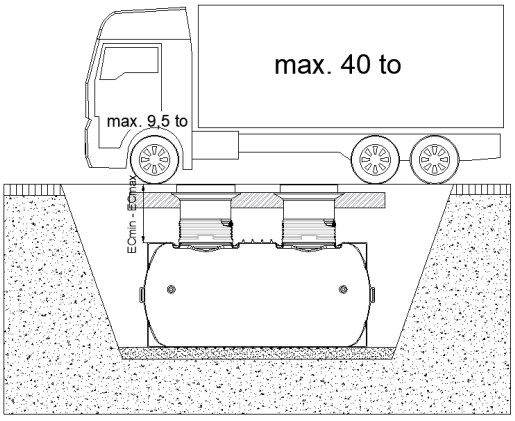
Minimum 380mm earth cover in green areas (pedestrian loads only). The clearance to the trafficable areas must correspond with the trench depth.



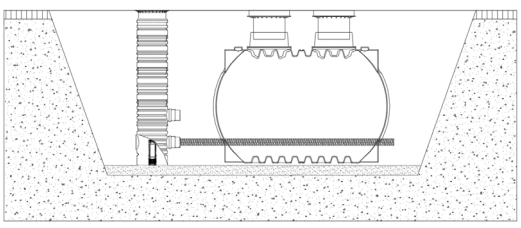
Under areas subjected to traffic of cars (load up to 3.5 t), a minimum 700mm earth cover is required, and class B lid must be installed.



Under areas subjected to traffic of trucks (load up to 40 t), a minimum 700mm earth cover is required, and class D cover must be installed.



Under areas subjected to groundwater, a minimum 700mm earth cover is required, and class B or D must be installed. The groundwater must be discharged via a drain line.

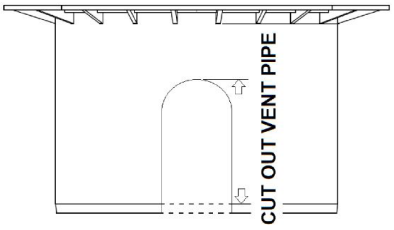


3. Technical data

SC model	Height (mm)	Width (mm)	Length (mm)	Weight (kg)	Dome option (mm)
2000	1100	1180	3000	190	305
3000	1340	1415	3000	235	305
4000	1520	1565	3000	285	290 / 610
5000	1685	1735	3000	355	290 / 610
8000	2290	2240	3490	495	290 / 610
10000	2290	2240	3490	495	290 / 610

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 3500.1 and AS/NZS 3500.2.
- If the telescopic shaft falls in front of the vent opening, please make sure to cut out the section that obstructs the venting as shown below.
- For special requirements please consult the local relevant authority.



4. Installation and assembly

4.1. Construction site

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

- The structural suitability of the ground.
- Maximum occurring short-term groundwater levels.
- Site requirements must be considered (embankment, expected loads, etc.).
- Safety against buoyancy and flotation must be ensured by an expert specifically to site.

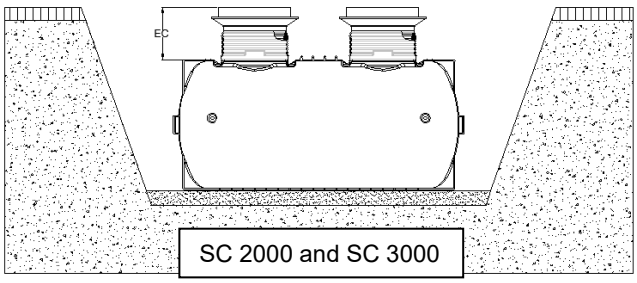
4.2. Earth cover requirements

- Under pedestrian areas not subject to traffic load nor groundwater

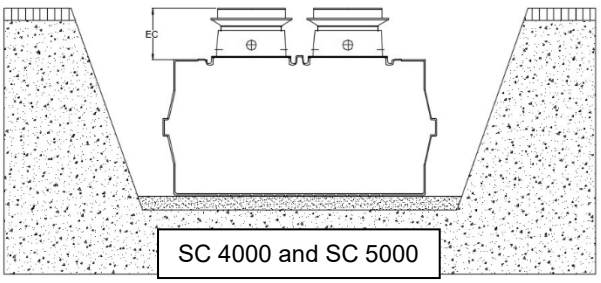
Earth cover	2000l	3000l	4000l	5000l	8000l / 10000l
EC Min	380 mm	380 mm	380 mm	380 mm	380 mm
EC Max	1500 mm	1500 mm	1200 mm	1200 mm	1500 mm

- Under trafficable areas (class B and class D)

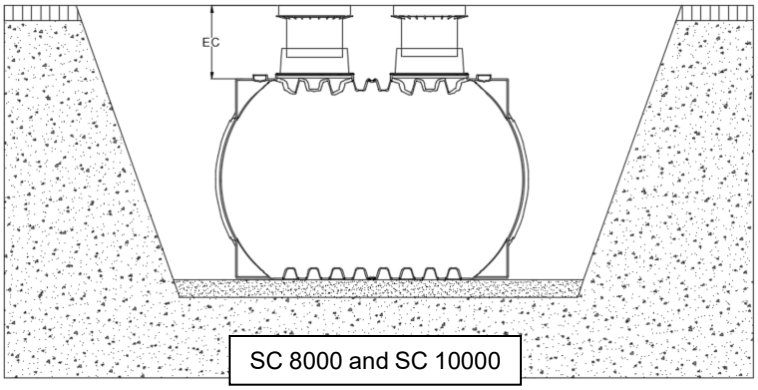
Earth cover	2000l	3000l	4000l	5000l	8000l / 10000l
EC Min	700 mm	700 mm	700 mm	700 mm	700 mm
EC Max	1500 mm	1500 mm	1200 mm	1200 mm	1500 mm



SC 2000 and SC 3000



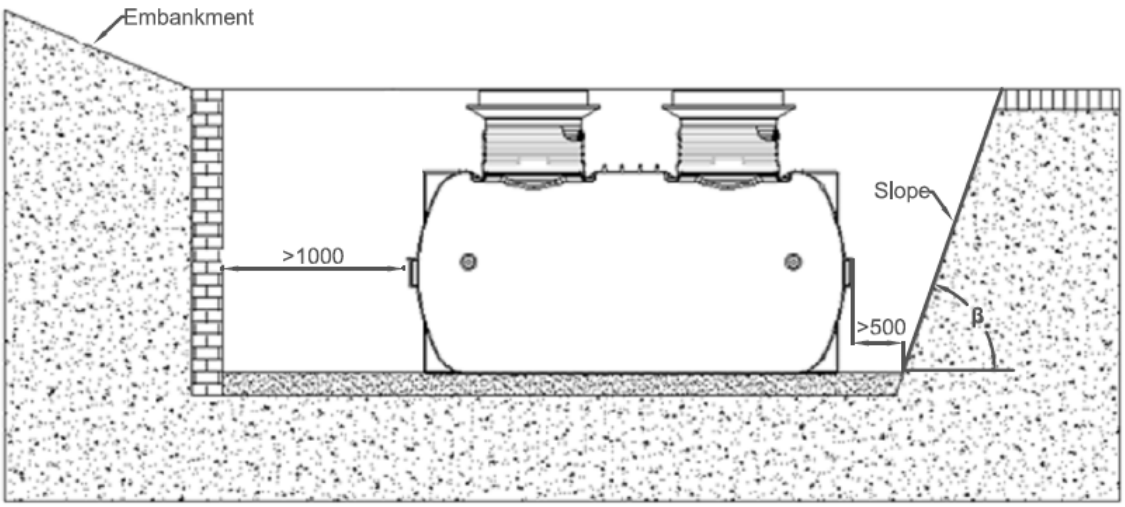
SC 4000 and SC 5000



SC 8000 and SC 10000

4.3. Trench

The building site must be horizontally even and must provide adequate load-bearing capacity. 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.



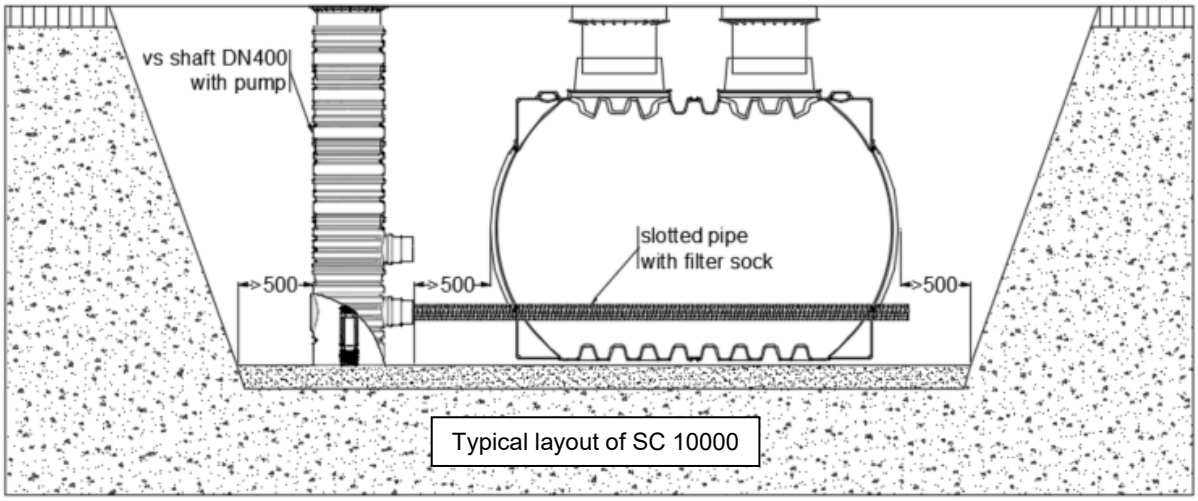
The depth of the trench must be dimensioned so that the maximum earth coverage (see section 2. Installation conditions) above the tank is not exceeded. A layer of compacted, round-grain gravel (grain size 8/16, thickness approx. 150 - 200 mm) must be laid down as a minimum foundation.

The clearance to fixed structures must be at least 1000 mm. If the tank is in proximity (less than 5 m) to a mound or embankment (greater than 5°), a statically calculated retaining wall must be built to absorb the active earth pressure. If there is no embankment on site or if its more than 5 m away from the excavation pit, a slope with the angle ß must be applied according to the following table.

Soil type	Required slope ß angle
Non-cohesive or soft, cohesive soil	≤ 45°
➔ If tank must be suitable for car traffic	≤ 50°
Stiff or semi-firm, cohesive soil	≤ 60°
Rock	≤ 80°

4.4. Groundwater and cohesive soil (e.g., clay soil)

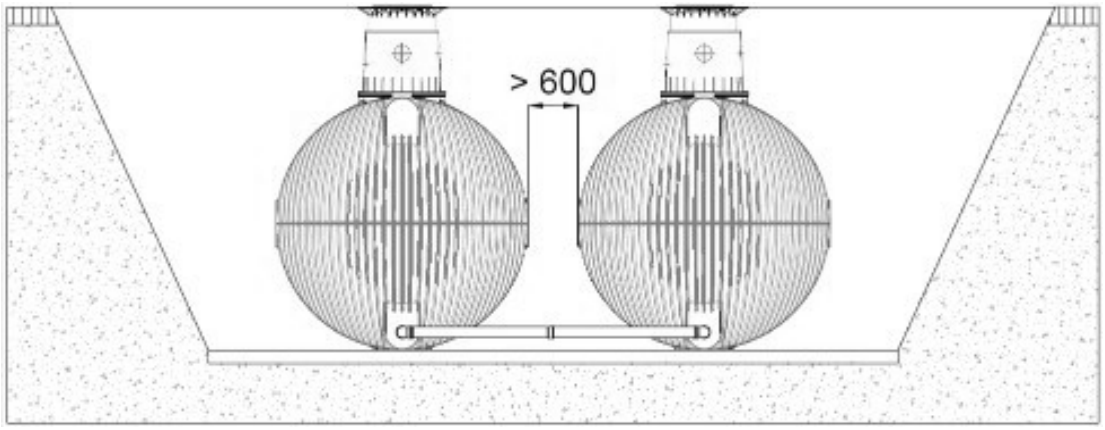
If the groundwater levels exceed the shoulder of the tank (and for 8,000 L and 10,000 L tanks, the limit is 1500mm from the bottom), even if only occasionally, it must be drained. GRAF offers a VS shaft DN400 / DN600 in which a slotted pipe with filter sock can be connected to drain the excessive water. We recommend the general laying of a drainage line, since a prolonged rainfall event could cause the groundwater level to rise unexpectedly. The pump must be installed by an electrician and inspected at regular intervals.



Typical layout of SC 10000

4.5. Connection of several tanks

Two or more tanks are connected via the assembly surfaces by means of GRAF Special Seals (DN 100 and DN 150 available) and basic pipes (no pipework is included).



It must be ensured that the distance between the tanks is at least 600 mm. The pipes must project 100 mm - 150 mm into the tanks.

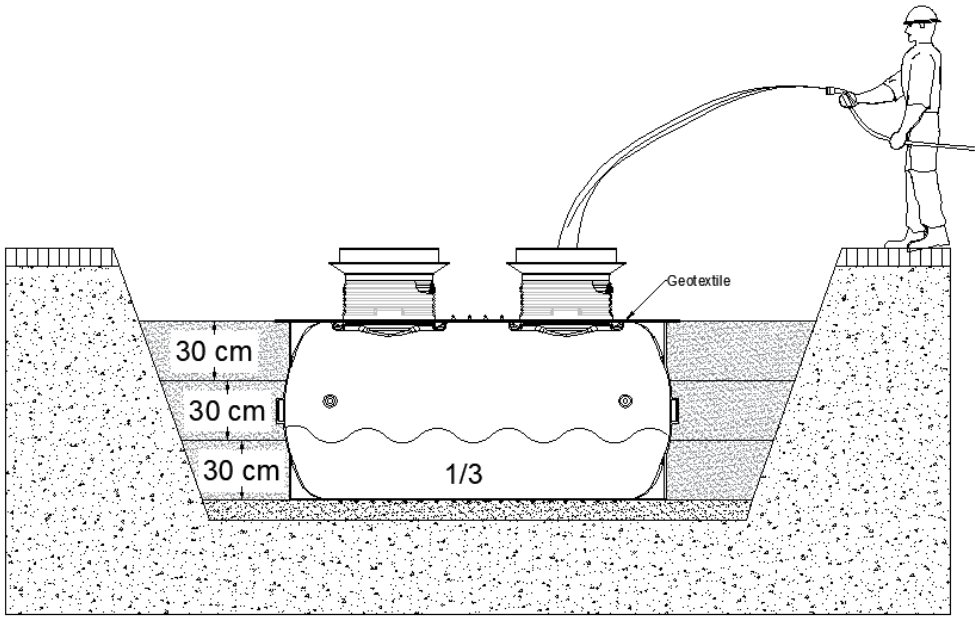
The apertures must be drilled to the corresponding size using only the GRAF special crown bit.

4.6. Customised connectiona

Customised connections (including welding spigots) and section arrangements are available, please contact GRAF for form.

4.7. Backfill instructions

To avoid deformations of the tanks, the filling of the tank and the filling of the building pit should be carried out simultaneously. Before filling the excavation, the tank will be filled up to 1/3; then the excavation is filled with layers of a maximum of 30 cm (grounded gravels with a maximum grain size of 8/16) up to the tank's upper edge. The individual layers must be compacted well (manual compactor). To prevent damage to the tank, the use of mechanical compacting equipment is not permitted at any time. A geotextile is recommended over trench to protect the earth cover material to be washed out into the backfilling layers.



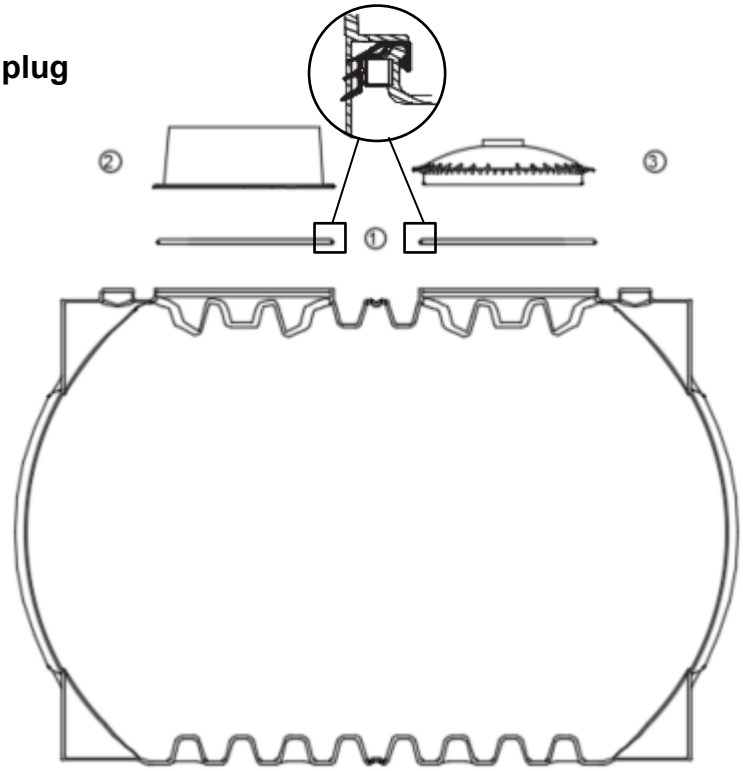
4.8. Routing connections

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

All suction, pressure and control lines must be routed in a conduit trough the dome or riser, which must be routed as straight as possible, without bending, with a decline. Necessary bends must be formed using 45° elbows.

5. Assembling the tank dome and telescopic shaft

5.1. Assembling dome and dome plug

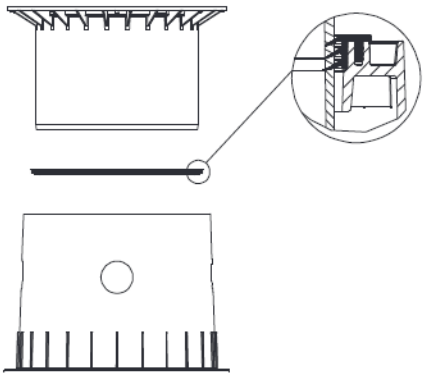


① Tubular seal (inserted in the correct position as shown)

② Tank dome (can be rotated by 3(

③ Tank plug

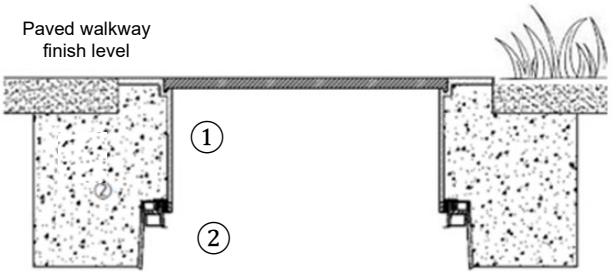
5.2. Assembling shaft



The enclosed profile seal (material EPDM) is coated generously with soft soap (do not use mineral oil-based lubricants, as these attack the seal) and inserted into the tank dome's sealing groove. The telescope shafts are then greased, inserted and aligned with the surface following their specific load installation as following.

5.2.1. Covers for pedestrian loads

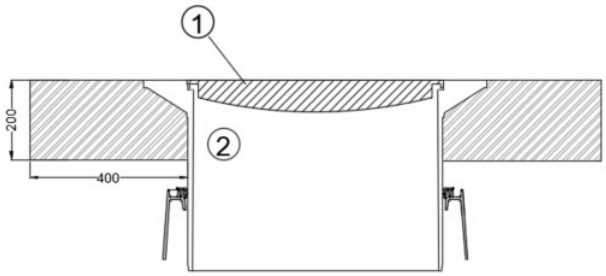
To prevent transferring loads onto the tank, the non-trafficable telescope shaft is backfilled with layers of grounded gravels (maximum grain size 8/16) and compacted evenly. Subsequently a tubular seal is inserted into the groove of the non-trafficable telescopic shaft ②.



Optionally, a foam rubber ring seal (104022) is inserted into the groove of the for tightness. Lasty, the pedestrian cover lid ① is placed and bolted. This lid should not be submitted to more than 150kg. Please observe all requirements prior lid installation (earth cover, venting, etc).

5.2.2. Covers for traffic of cars - insert option

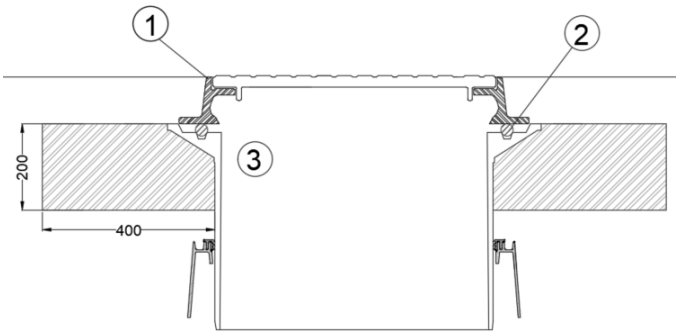
For the insert option, a concrete underlay (property class N25) must be placed in a concrete support collar around GRAF telescopic trafficable shaft class B insert option (319502) ②. The circumference of the concrete layer to be filled in must be at least 400 mm wide and approximately 200 mm high.



Lastly, the class B cover lid (381515) ① is placed on the GRAF telescopic trafficable shaft class B insert option (319502) ②. A suitably designed finished floor is to be constructed to support the required designed vehicle load. Please observe all requirements prior lid installation (earth cover, venting, etc).

5.2.3. Covers for traffic of cars - regular option

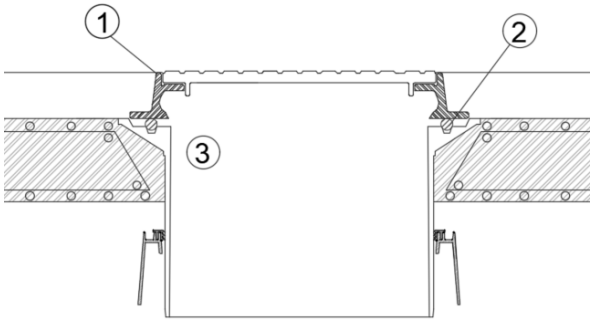
If the tank is installed underneath an area with car traffic (class B), concrete underlay (property class N25) must be placed in the concrete support collar around the trafficable telescopic heavy-duty shaft (371021). The circumference of the concrete layer to be filled in must be at least 400 mm wide and approximately 200 mm high.



Optionally, a tubular seal (934609) ② is inserted into the groove of the trafficable telescopic heavy-duty shaft (371021) ③ for gas tightness. Lasty, the class B cover lid (75.0016) ① is placed. A suitably designed finished floor is to be constructed to support the required designed vehicle load. Please observe all requirements prior lid installation (earth cover, venting, etc).

5.2.4. Covers for traffic of trucks

If the tank is installed underneath an area with truck loading (class D), concrete underlay (property class N25) must be placed in the steel reinforced concrete support collar around the trafficable telescopic heavy-duty shaft (371021). The cast frame must have a supporting area of approx. 1 m^2.



Optionally, a tubular seal (934609) ② is inserted into the groove of the trafficable telescopic heavy-duty shaft (371021) ③ for gas tightness. At last, the class D cover lid ① (75.0017) is placed. A suitably designed finished floor is to be constructed to support the required designed vehicle load. Please observe all requirements prior lid installation (earth cover, venting, etc).

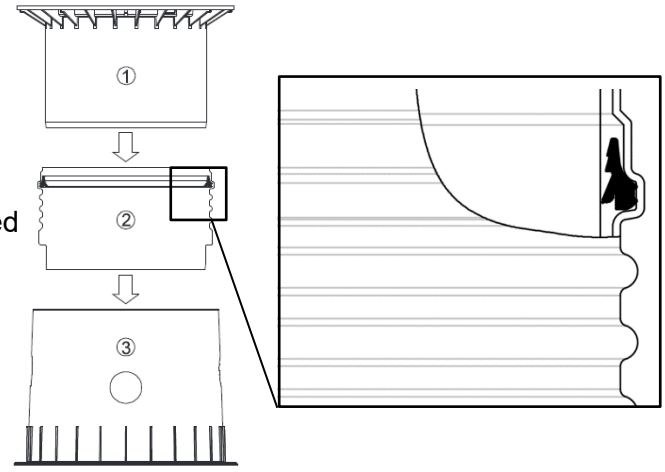
5.3. Assembling the extension riser

For deeper installations, within installation window, an extension riser is used. To insert the riser into the tank dome, soft soap is needed. The profile seal is inserted into the highest groove of the extension riser and greased generously. Afterwards push the telescopic shaft into the riser and adapt it to the planned area surface.

① Telescopic shaft (can be inclined by 5°)

② Extension riser (ensure the seal is inserted in the correct position as shown)

③ Tank dome (can be rotated by 360°)



6. Inspection & servicing

The entire system must be checked for leaks, cleanliness and stability at least every three months.

The entire system should be serviced at intervals of approx. 5 years. In this case, all parts of the system must be cleaned and their function checked. 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.