GRAF UNDER GROUND STORM WATER TANKS

Storm Water Detention & Retention Installation Instructions & Technical Information

Table of contents

1. INTRODUCTION, FILL MATERIALS & GENERAL NOTES ON SAFETY 1-4
1.1 Selecting the right system 5

2. INSTALLATION CONDITIONS 6
3. TECHNICAL DATA 7
4. TANK ASSEMBLY 7
5. INSTALLATION AND ASSEMBLY 8

5.1 Construction site 8
5.2 Trench 8
5.21 Slope Embankment, ... 9
5.22 Ground water 9
5.23 Installation adjacent to traffic 9
5.24 Installation connection of several tanks 9
5.3 Insertion and filling 10
5.4 Plumbing connections 10
5.5 Class D Installation 11

6. ASSEMBLING THE TELESCOPIC DOME SHAFT 12
6.1 Assembling the Telescopic dome shaft 12
6.2 Installation of pedistrian dome shaft 12
6.3 Installation of car dome shaft 12

7. ASSEMBLY OF THE EXTENSION RISER 13
8. INSPECTION AND SERVICING 13
9. MINIMAX PRO FILTER 14
9.1 Filter Components 14
9.2 Filter Specifications 14

10. PICTORIAL INSTALLATION GUIDELINES 16-17
11. INSTALLER SUPPORT SERVICES 18
12. CUSTOM MADE TANKS 18
13. STORM WATER DETENTION SYSTEMS 19
14. STORM WATER RETENTION SYSTEMS 20-21
15. ORIFICE FORMULA & FLOW CALCULATIONS 22
16. VOLUME MEASUREMENTS 23
17. PRODUCT CERTIFICATION 23

Graf Platin Storm Water Detention & Retention Installation & Maintenance Instructions

The Graf Platin is made in Australia and is suitable for under deck, semi submerged and below ground installations. Ready-made packages are offered in 10,000L 6000L, 5000L, 3,000L &1,500L in both pedestrian and car options. Larger size systems are available contact any Reece Branch for assistance.

AS/NZ 4766, AS/NZS 1546.1

Platin Manufactuer:

Certified to Quality standard ISO9001-2008

The points described in these instructions must be observed under all circumstances.

All warranty rights are invalidated in the event of non-observance.

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

Detention

Retention

Graf Platin Fill Materials

Backfill Materials

7mm Minus (preferred)
Washed Sand

100mm compacted, hole base – 20mm type B crush rock

100mm "Compacted" Hole Base
20mm Type B Crushed Rock
(porous)

Wrong Backfill – Non Porous Materials (Do Not Use)

Builders Sand, Clay, Cement, Types C & D Crushed Rock, and any other non porous or water holding soils. Incorrect soils used may "void warranty".

1. General Notes

Safety
As Occupational Health and Safety legislation differs in each state and territory, it is necessary to refer to all relevant Occupational Health and Safety legislation, regulations and Australian Standards in your state or territory at all times during installation, assembly, servicing and repair of the Graf Platin storage tank systems.

Current statutory regulations and all relevant Australian standards shall be taken into consideration at all times. The system and any of its individual parts must be installed by a licensed person. Installation by a non-licensed person may void warranty.

The entire system must be shut down before any maintenance can be undertaken. Once any maintenance is completed the tank must be properly sealed/locked by means provided with the tank to prevent future unauthorized entry.

Graf offers a wide range of accessories which all match each other. The use of non Graf accessories may lead to the voiding of warranty and any subsequent claims of liability from any resulting damages.

Identification of water pipes and outlets
All service water pipes and outlets leading from the Graf water tank should be identified in accordance with AS/NZS3500.1:2003-Section 9 and other relevant local plumbing regulations to avoid inadvertent connection with the drinking water supply.

In order to avoid the wrong connection between the drinking water and the rain water pipe work, all conduits and tappings of rain water have to be marked clearly with “RAINWATER” in writing and be in accordance with local standards.

All non-drinking tank water outlets connected to a retention tank should be clearly marked “RAINWATER” and we recommend they be installed with vandal proof taps. Depending on local laws, rain water may or may not be suitable for human consumption and/or use for personal hygiene. The mixture of rainwater and surface stormwater should be avoided in retention systems.

Maintenance
In the event of work needing to be carried out inside the tank, as Occupational Health and Safety legislation differs in each state and territory, reference should be made to confined spaces legislation in your state or territory.

Site
As Occupational Health and Safety legislation differs in each state and territory, reference should be made to excavation and trenching legislation in your state or territory with respect to the use of excavation equipment and relevant trenching legislation in reference to shoring, battering and depth specific regulations.

Lifting of Tanks
Occupational Health and Safety legislation and regulations differ in your state and territory, therefore reference should be made to your state or territory legislation when lifting, handling or moving of Graf water tanks.

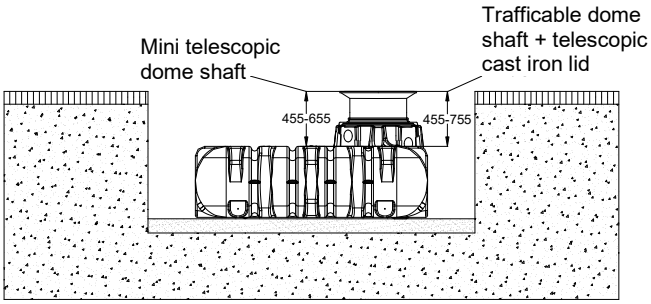
1.1 Selecting the Right System

To Select Your System you need to know the following:

1. **Detention or Retention?**
2. **Required volume of the system?**
3. **Discharge flow rate or orifice size?**
4. **Depth of invert level or legal point of discharge?**

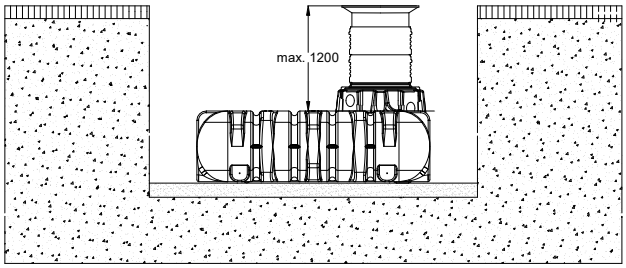
2. Installation conditions

Coverage heights with telescopic dome shaft in green areas.



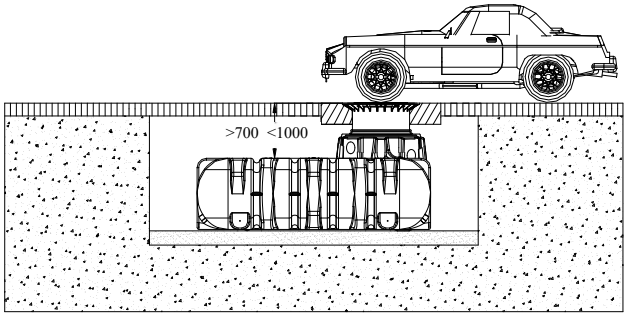
Maximum coverage heights with the maximum two extension risers and telescopic dome shaft.

In green areas only – not under areas used by passenger cars. (Unless an engineered suspended slab has been installed)



Coverage heights with cast telescopic dome shaft (class B) in areas used by passenger cars.

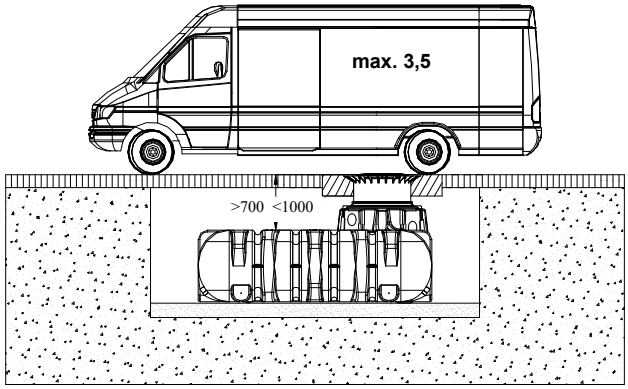
(without groundwater and stratum water)



Coverage heights with telescopic dome shaft with cast iron lid. Maximum load of the area used by passenger cars 3.5 tonne.

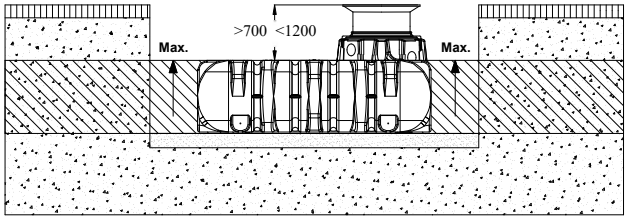
(without groundwater or stratum water)

Class D Installations: See 5.5.



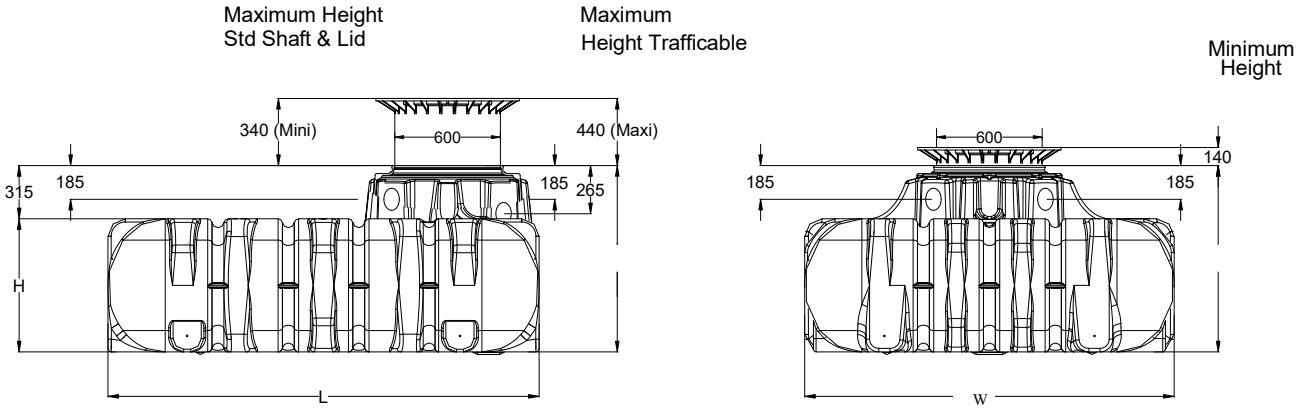
Coverage heights on installation in groundwater – the hatched area specifies the permissible immersion depth for the tank.

(not under areas used by passenger cars)



3. Technical Data

Platin Tank with Telescopic Shaft & Lid



Graf Platin Tank	1500 Litres	3000 Litres	5000 Litres	6000 Litres (2 x 3000L)	10,000Litres (2 x 5000L)
Weight	82 kg	180 kg	250 kg		
L	2100 mm	2450 mm	2890 mm		
W	1250 mm	2100 mm	2300 mm		
H	700 mm	735 mm	1000 mm		
Htot*	1015 mm	1050 mm	1315 mm		
Minimum Hole Size (L x W x H)	**2300 x 1450 x 1155mm**	**2650 x 2300 x 1190mm**	**3090 x 2500 x 1455mm**	**2650 x 4900 1190mm**	**3090 x 5300 1455mm**

4. Tank Assembly

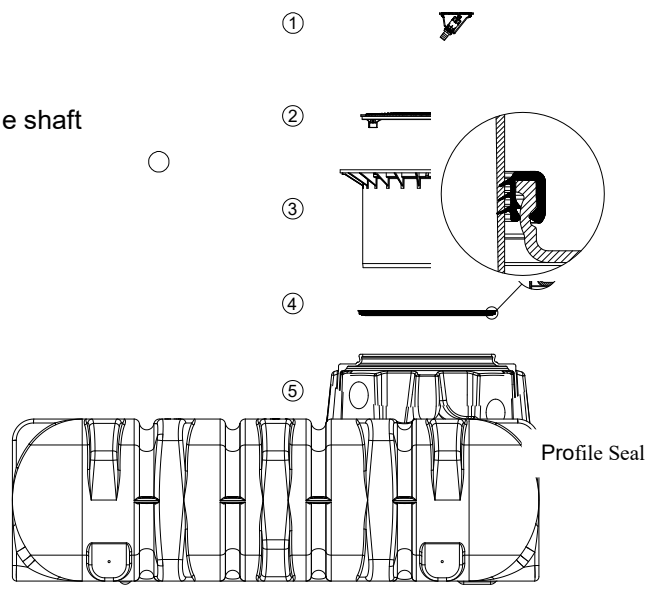
① Water connector box internal

② PE (pedestrian) or Cast Iron (car) lid for telescopic dome shaft

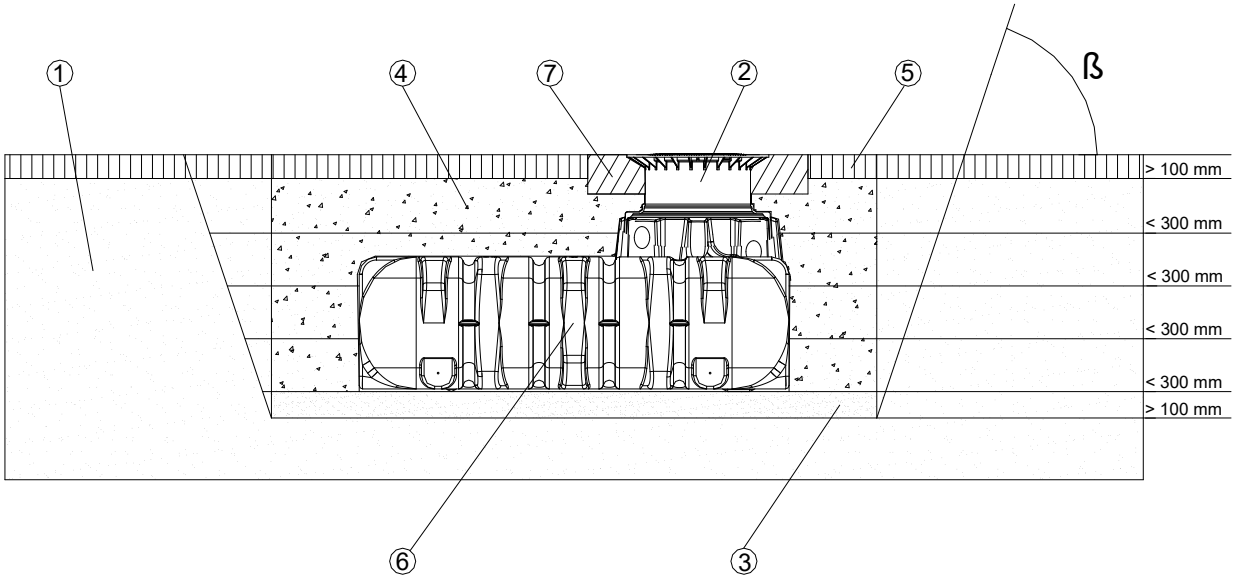
③ Telescopic dome shaft (can be inclined by 5°)

④ Tank Dome Seal (profile seal)

⑤ Tank dome



① Subsoil
② Telescopic dome shaft
③ Compacted foundation refer page 2.
④ Backfill Material, 7mm Minus or washed sand fill material must be porous see page 2.
⑤ Covering layer
⑥ PLATIN Underground Tank
⑦ Concrete layer for surfaces used by passenger cars
ß --> angle of cut to depth of the trench



5.1 Construction site pre-check

The following points should be clarified before installation commences:

- The structural suitability of the ground (geotechnical report recommended)*
- Maximum groundwater levels which occur and drainage capability of the subsoil
- Types of load expected, for example: traffic loads
- Location of all underground services

* A geotechnical report conducted by civil testing engineers is strongly recommended to determine the physical characteristics of the subsoil before installation/excavation commences. For setback distance from neighbouring boundary and any buildings, please contact local council.

5.2 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 more than the depth of the trench away from the structure.

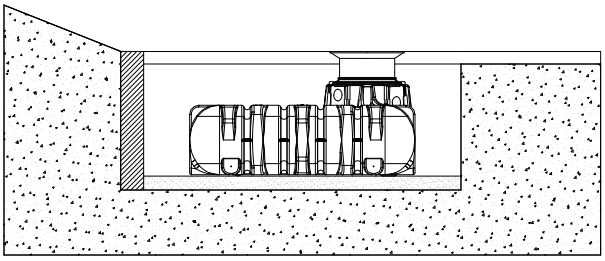
If the depth of the trench is > 1250 mm an embankment must be designed according to meet all safety standards. The construction site must be level and must guarantee sufficient load-bearing capacity.

The depth of the trench must be sized, so that the maximum earth coverage (see point 2 – installation conditions) above the tank is not exceeded.

A layer of compacted, Type B Crushed Rock (porous round-grain gravel grain size 8/16, thickness approx. 100 - 150 mm) is applied as the foundation. See Page 2.

5.2.1 Slope, embankment, etc.

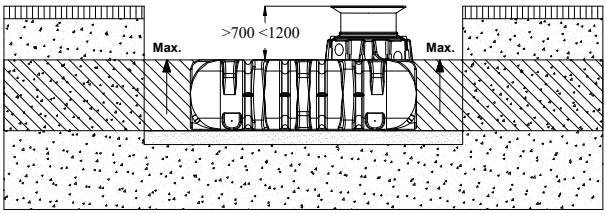
If installation of the tank is in the immediate vicinity (< 5 m) of a slope, earthen mound or slope, a statically calculated supporting wall must be erected to absorb the soil pressure. The wall must exceed the dimensions of the tank by at least 500 mm in all directions, and must be located at least 1000 mm away from the tank.



5.2.2 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).

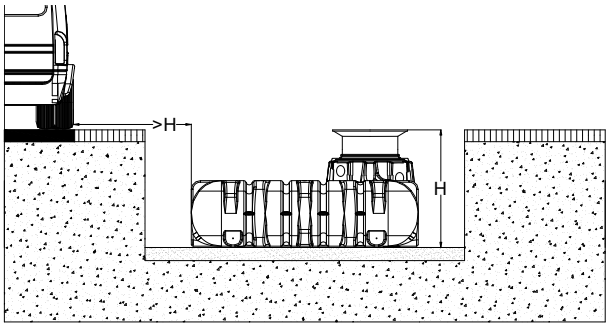
Dissipation of the drainage water (e.g. via an annular drainage system) is recommended in the case of cohesive, water-impermeable soils.



1500L -> 700mm / 3000L -> 735mm / 5000L -> 950mm

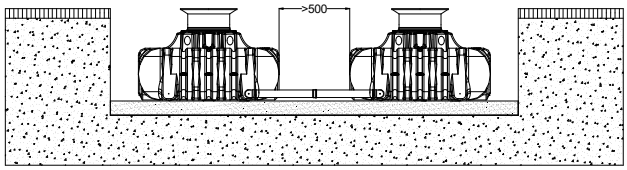
5.2.3 Installation adjacent to surfaces used by vehicles

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



5.2.4 Connection of several tanks

When two or more tanks are to be connected together this is done by joining the tanks together by using the GRAF Platin Interconnect Tank Seal (Red) and basic 100mm PVC pipes (to be provided by the installer at the construction site).

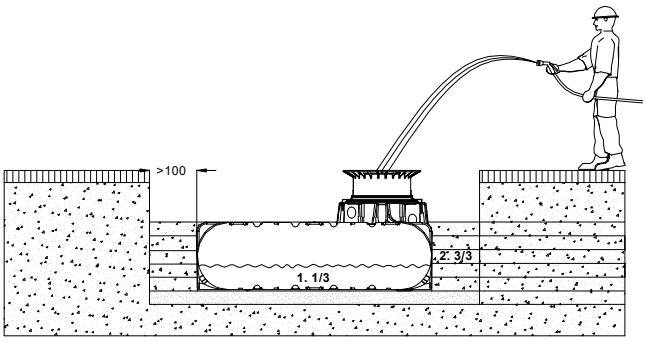


The connecting holes must be pre-cut using “only” the special GRAF 124mm hole saw. The distance between the tanks must be a minimum 500mm. The pipes must project at least 100mm inside the tanks.
Note: Connected tanks must be ordered with the Pre Drilled Holes and interconnecting tank seal.

Use a 40mm pressure pipe (or equivalent approved pipe) for air balance pipe between tanks.

DN 50mm seal provided.

5.3 Insertion and filling

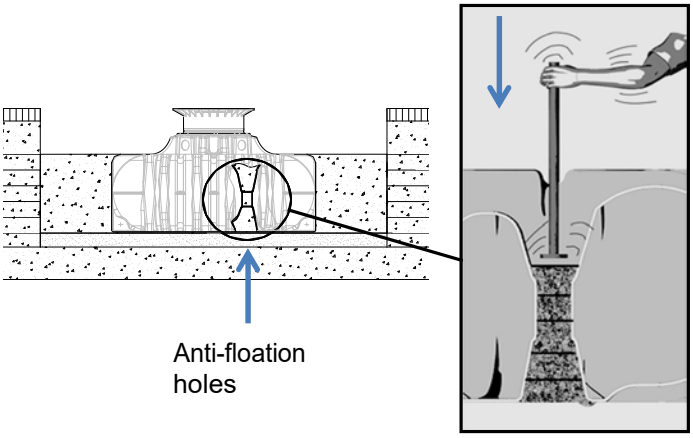


The tanks must be inserted, impact-free, into the prepared trench using suitable equipment. To avoid deformities, the tank is to be 1/3 filled with water before undertaking any backfilling.

Ensure minimum distances between trench wall (100mm) and between tanks (500mm).

Once sufficient water is in the tank the surrounding trench is then filled with 7mm Minus in layers of 30 cm steps and is manually compacted. See page 2.

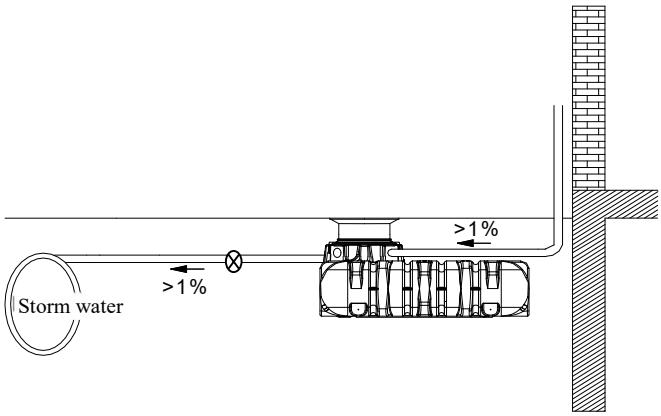
The individual layers as well as the anti- floatation holes (see pictures to the right) must be well-compacted by manual tamper.



Damage to the tank must be avoided during compaction. Mechanical compaction machines must not be used under any circumstances.

Note: The surrounding trench must be a minimum 100mm wider on all sides than then the tank.

5.4 Plumbing connections

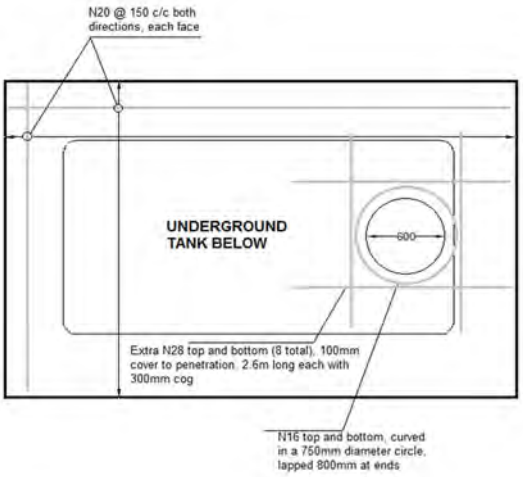


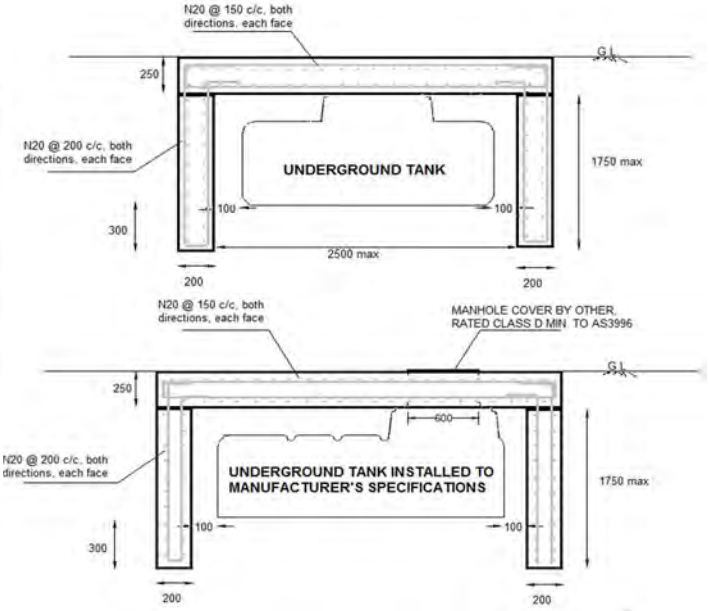
All feed and overflow pipes must be plumbed with a decline of at least 1% in the direction of flow (possible, subsequent settling must be taken into consideration in this case). If the tank overflow is connected to the public storm water, this must be protected against reflux by means of a Reflux Valve refer AS/NZS3500.1:2003

All suction, pressure and control lines must be routed inside 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 45° moulded sections.

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

5.5 Graf Platin – Class D Installation





Class D Lid Notes

Gatic (standards approved) 800mm round Class D Lid must be used to obtain the Graf Platin 12 Year Warranty in all Class D Installations. Installation must be as per the Gatic instructions. The Graf Platin Standard Lid is installed into the Graf Platin Tank underneath the Gatic Class D Lid.

Concrete Notes

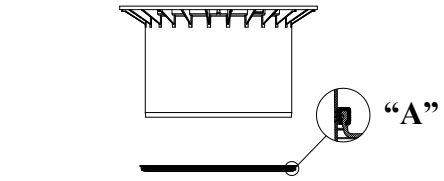
C1. All concrete workmanship to be in accordance with AS 3600
C2. All concrete to have the following properties:
32 mpa min cylinder compressive strength
7mm min, 20mm max aggregate size 60mm slump
400kg/m3 cement content (Shotcrete Mix)
C3. All concrete to be cured by approved methods for min 7 days
C4. All reinforcement shall be 'n' bars 500 mpa in accordance with as 4671.
C5. All steelwork to be treated in accordance with BCA corrosion requirements.
C6. Cover to reinforcement to be min 35mm from all faces.
C7. Damp proof membrane to be used for surfaces in contact with soil
C8. Steel reinforcement to be continuous at all locations, ensure minimum 50 x bar diameter lap at splices and corners.
C9. Concrete admixtures may be used provided chloride ion Content from sources is < 0.4% of the mass of portland cement in the mix. Calcium chloride is not an acceptable admixture.

<u>Foundation and Backfill Notes</u>

F1. All backfill to be compacted in max 300mm layers using clean, well graded sand or quarter minus. Sand penetrometer reading of at least 7 blows per 300mm. Compact natural sand to a depth of 600mm min below the bottom of the foundation.
F2. Compaction to achieve an allowable bearing pressure of 200 kPa minimum. Under walls.
F3. Ground water table has been assumed to be well below base of structure.

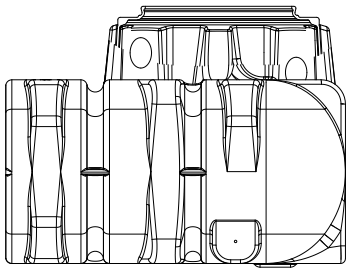
6. Assembly of the telescopic dome and shaft

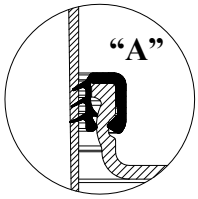
6.1 Assembling the telescopic dome shaft



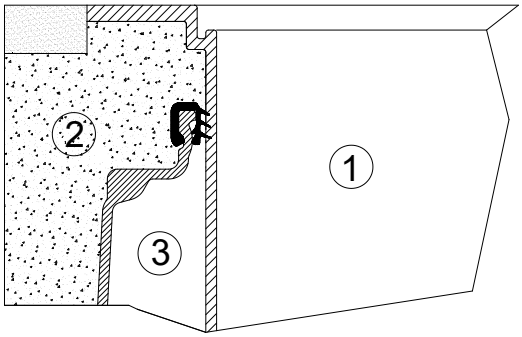
The telescopic dome shaft enables infinite adaptation of the tank to given site surfaces with earth coverage of between 455mm and 655mm (standard telescopic dome shaft) or 455mm and 755mm (trafficable telescopic dome shaft).

For assembly purposes, the enclosed tank dome seal (profile seal - material EPDM) is inserted into the tank dome's sealing groove and is coated generously with the soft soap supplied (do not use mineral oil-based lubricants, as these attacks the seal). The telescope is then also lubricated, inserted and aligned with the surface of the site.



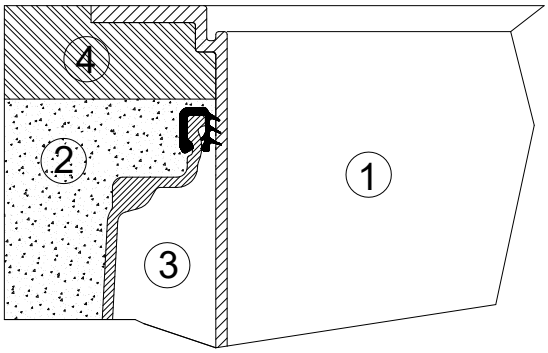


6.2 Telescopic dome shaft on which persons may walk



Important: To prevent loads from being transferred onto the tank, ② (7mm Minus) is filled in layers around the telescope ① and is evenly compacted. Damage to the tank dome ③ and telescope must be avoided during this step. The cover is then positioned and is sealed and tightened to prevent entry by children.

6.3 Telescopic dome shaft over which passenger cars may drive



If the tank is installed under areas used by passenger cars, the collar area of the telescope ① (colour grey) must be supported with concrete ④ (load class B25 = 250 kg/m²). The layer of concrete to be installed must be at least 300 mm wide and approx. 200 mm high all around. The permitted coverage above the shoulder of the tank is min. **700 mm** and max. **1000mm**.

Attention: Use the cast cover under all circumstances.

7. Assembly of the extension riser

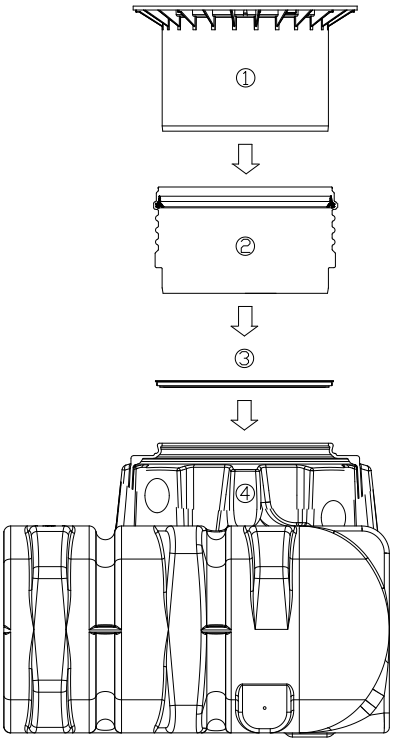
For larger coverage heights an extension riser is needed. Insert the extension riser into the tank dome, (soft soap is needed) then into the highest groove of the extension riser inserted the profile seal and soap generously. Afterwards push the telescopic dome shaft into the extension riser and adjust it to the planned area surface.

1 x Extension Riser = max. earth-cover 955 mm (with standard lid and shaft)

respectively 1055 mm (with vehicle lid and shaft)

2 x Extension Risers = max. earth-cover 1200 mm (with standard lid and shaft)

Only suitable for car with a suspended slab.



① Telescopic dome shaft (can be inclined by 5°)

② Extension Riser

③ Tank to Dome Seal (profile seal)

④ Platin Tank Dome

8. Inspection and servicing

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

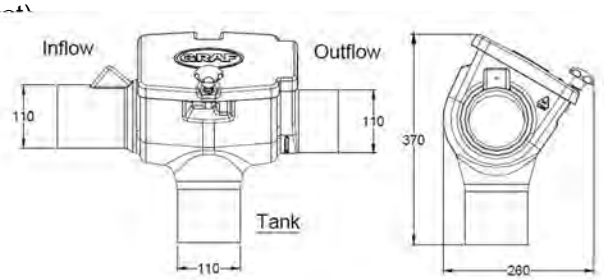
The entire system should be serviced at intervals of approx. 5 years. In this case, all parts of the system must be cleaned and their function checked. Servicing should be carried out as follows:

- Drain the tank completely
- Clean surfaces and internal parts with water
- Remove all dirt from the tank
- Check that all internal parts are firmly seated.

9. Minimax Pro Filter Package –Installation in Storm Water Retention System

9.1. Minimax Pro Internal Filter consists of: (supplied)

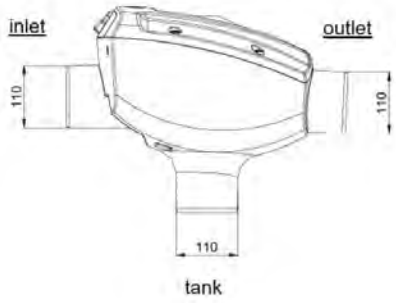
- Filter Body, Filter Basket
- Two Spannfix Collars
- Emergency Overflow Siphon & Rodent Guard
- Settled Inlet Connection
- 1 x 150mm Rubber Ring Grey Pipe Adaptor (for outlet)
- 1 x 250mm Rubber Ring Grey Pipe Adaptor (for inlet)

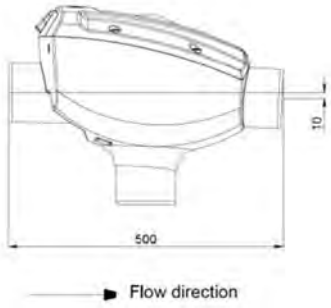


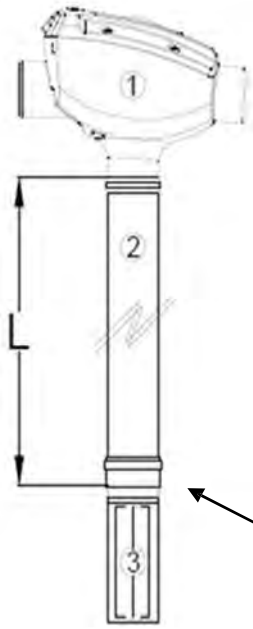
Notes:

- The filter has a built in difference between in
- The filter is suitable for roof areas up to 350
- The mesh width in the sieve insert is 0.35m m

9.2. Technical Specifications



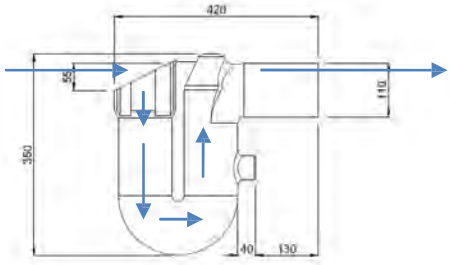




Pipe length (L) with bush:

1500L = 335mm
3000L = 365mm
5000L = 545mm

(all dimensions = +/- 3%)
Pipe dimensions =/- 10mm)



Emergency Overflow Siphon

9.3 Installation of inflow pipe and overflow siphon

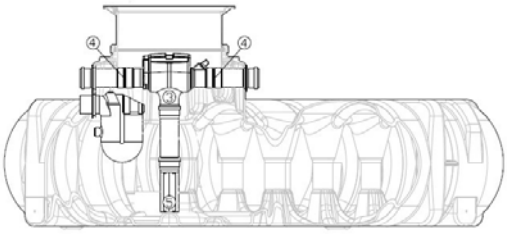
The emergency overflow siphon (pictured above) is installed at 90 degrees to the inlet and outlets of the tank; the Rodent Guard is inserted in the opening of the trap.

9.4 Filter Installation

Connect the filter body into the bell end of 100 mm PVC pipe as per (L) above using a 100mm plumb quick (not supplied). Having already cut the pipe to the required length connect it into the rubber ring of the inlet stilling system ensuring it is firmly in place before lowering it into the tank.

9.5 Insert the filter cartridge into the tank

Insert the filter, prepared with the inflow pipe and the inlet stilling system, into the tank.



Fix the filter into place using both rubber ring adaptors facing outwards from the dome with the 250mm adaptor on the inlet and the 150mm adaptor on the outlet.
These adaptors "butt" up against the filter body
and are joined by the Graf Spannfix collars (supplied).

Please note collar strap joins must be at top and accessible. They provide a simple disconnection of the filter body without the need for tools.

To position the Minimax Filter correctly - push the 150mm rubber ring adaptor on the outlet, fully in, by doing this you will be positioning the inlet stilling system so it sits in between the tank bottom ribs.

9.6. Commissioning

The filter sieve functions only in one flow direction; the direction is marked on the stainless steel tray. Run water into the tank and filter system to check the connection.

9.7. Regular Maintenance

To ensure maximum water yield, the filter must be checked for dirt and debris immediately following the first rainfall occurrence after the tank installation. It must also be checked after any "major" rainfall event and/or after any long dry spells.

The complete system is to be inspected at least every 3 months for, cleanliness and stability. To ensure the expected water yield is delivered, it is important to inspect and clean the filter sieve at regular intervals. The optional Spray Cleaner when connected provides additional insurance against filter blockage; it can be plumbed up to the tank rainwater pump line. Depending on the connection it can be operated manually by use of an external ball valve or automatically by the installation of a timer and solenoid valve.

When carrying out a service of the integrated filter it is also required that the overflow siphon is checked and cleaned.

Correct Installation of Graf Minimax Filter Package in a Retention System

1. Dig excavation and provide 100-150mm of well compacted level base

2. Lift tank/s off truck using suitable lifting equipment

3. Use digger to lift tank/s into the hole

4. Back fill must be compactable porous with a maximum size of 7mm. Refer 5.3

5. Connect plumbing, 1/3 fill tank with water and then back fill. Refer 5.3

7. Insert U shaped doubled sided tank to dome shaft seal. Refer to 6.1

8. Connect the detention/retention fitting through the red seal inside the tank. The plumber to supply and fit PVC ouside of the tank.

9. Connect Minimax Pro Filter Package in Retention System and install pump and changeover device (Rain 2 Main)
Refer 9.1 – 9.7

10. Lube up rubber seal with liquid soap provided before inserting Shaft & Lid

11. Install Graf Telescopic Shaft & Lid (man hole) to tank

12. Complete Landscaping

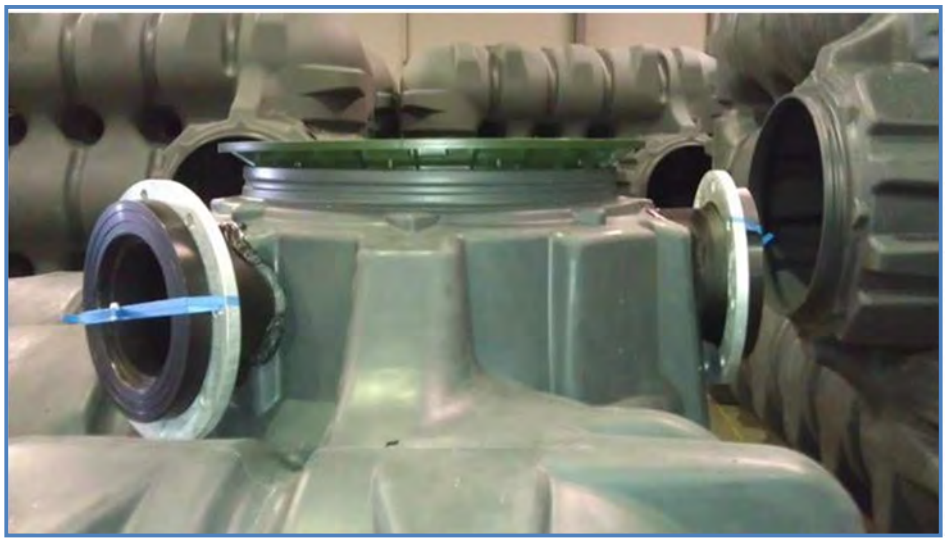
11. Installer Support Service

Reece has available Plumbing Product Specialists in each state to support installing contractors as required with advice on installation of Graf Tanks & Filters.

Contact your local Reece Branch for assistance, eg. technical support, design and drawings.

12. Customer Made to Suit Clients Needs

Connection options are available in 150mm, 225mm & 300mm.



Example of - Graf Platin with 225mm Welded in Flanges

Storm Water Detention & Retention Technical Information

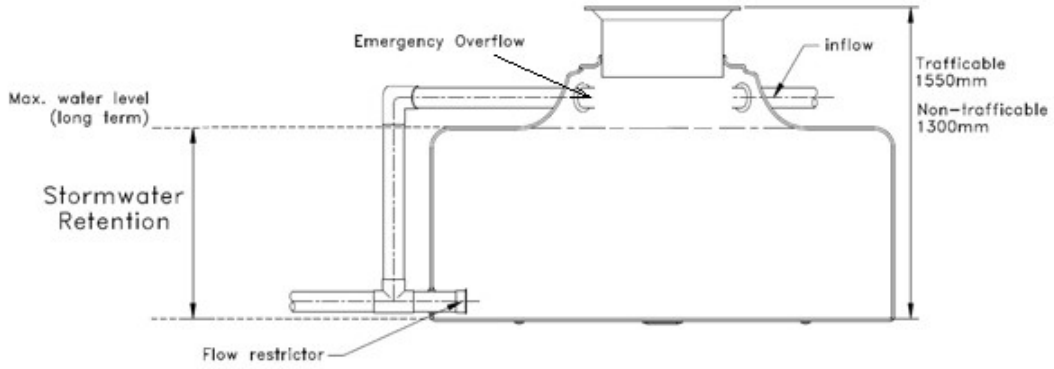
13. Storm Water Detention System

Due to its shallow excavation and strong construction, the Graf Platin underground tank is ideally suited as either a detention tank or a retention system.

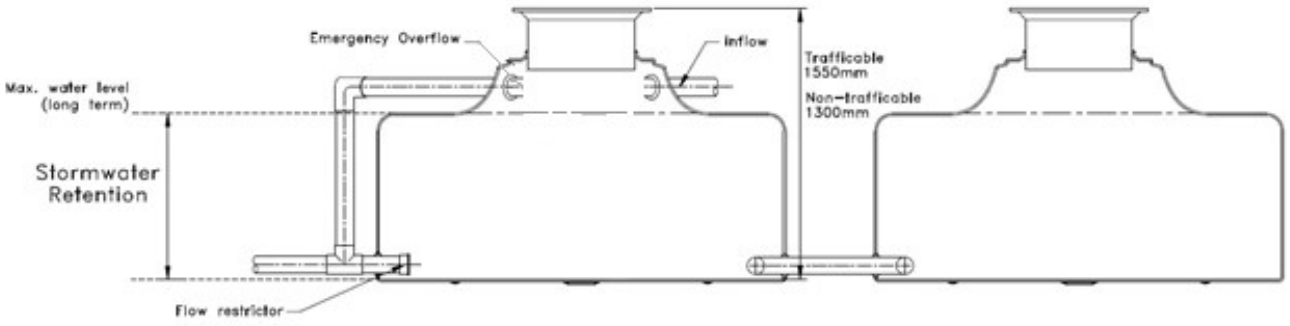
Detention Tank *(Detain)*

A detention tank is required by many councils and local authorities to capture and hold rain and storm water on the property and then slowly release it back into the storm water system to ensure flash flooding of stormwater drains does not occur. The council or authority will normally nominate the amount of water to be detained and the flow rate of the release of this water back into the storm water system.

Single Detention Tank



Two or More Detention Tanks



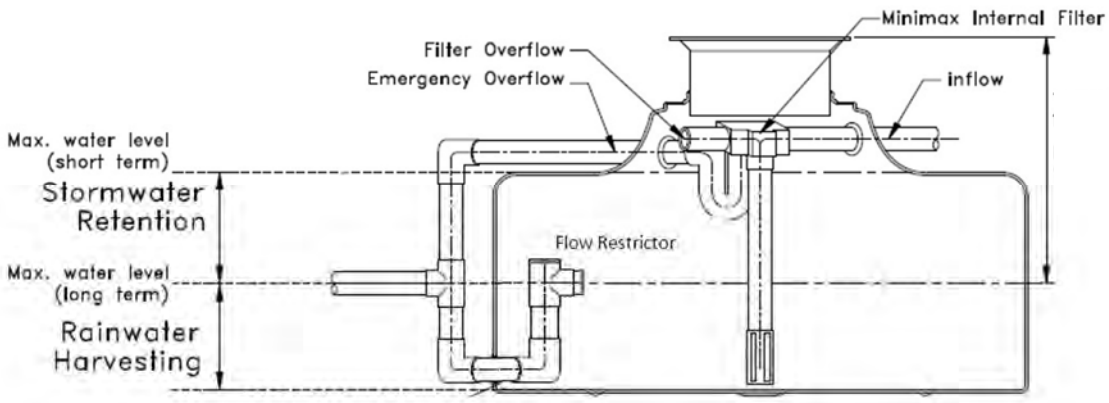
14. Storm Water Retention System

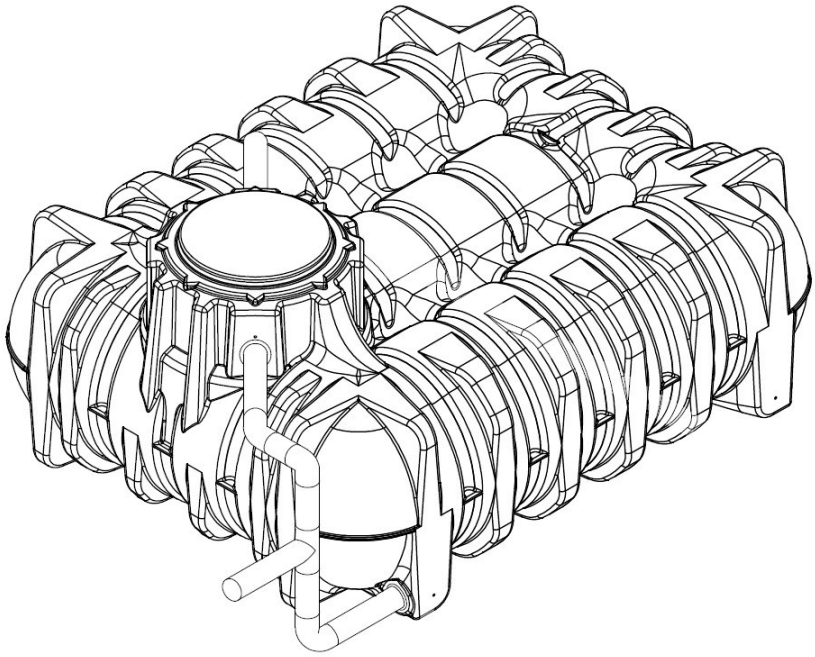
With a national focus on water savings by collecting rainwater, the installation of a rainwater detention - retention system coupled with a quality filtration system, enables clean quality rainwater to be collected in the Graf Platin Tank. The mixture of rainwater and surface stormwater should be avoided in retention systems.

Sized and set up correctly the tank will *detain* a specific amount of water required by the council before letting it go slowly back into the storm water system. It will also provide the *retention* of a suitable amount of rainwater for use by the property owner. Thus replacing the need to buy an additional rainwater tank. The property owner can use this *retained* water for such purposes as flushing toilets, filling washing machines and watering gardens.

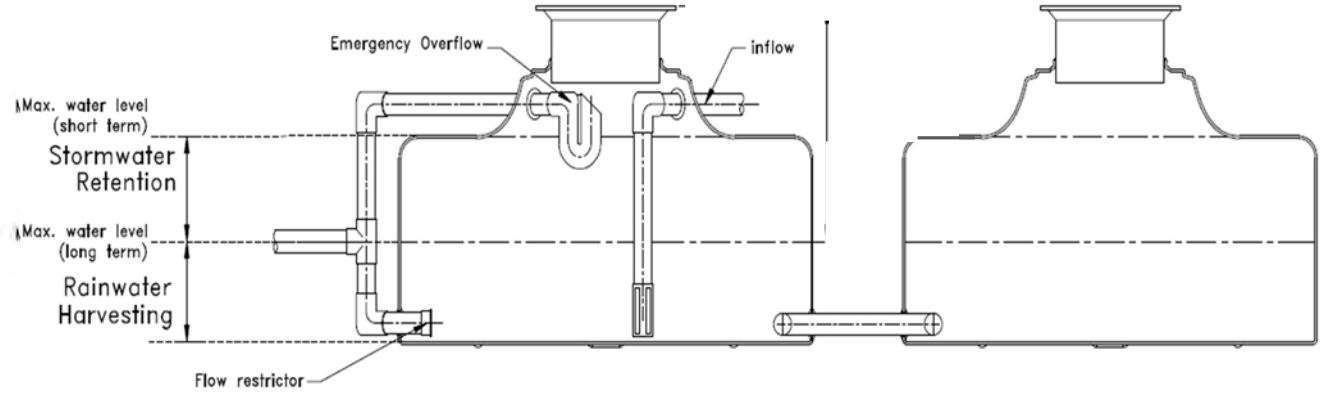
Typical Installation of Platin as a Storm Water Retention System

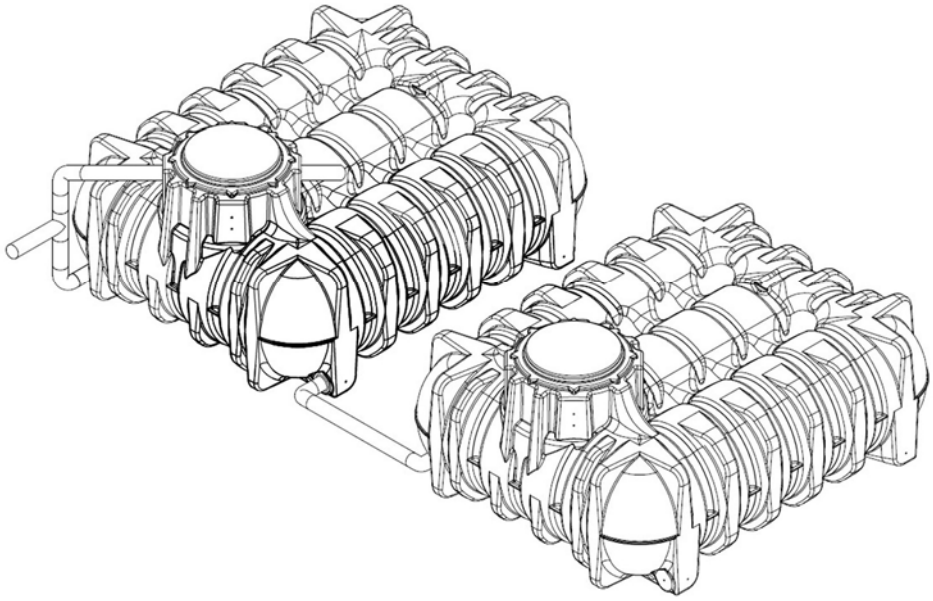
Single Retention System (with Minimax Filter Package)





Two or More Retention (with Minimax Filter Package)





Example of a Multiple Tank (6) Installation

Orifice Formula

Calculating the orifice formula is normally done by local councils and or engineers.

The calculations are done to ensure that the volume of water, coupled with the head of the water in the tank is matched with the orifice size to ensure the storm water entering back into the storm water system will be below its capacity limits.

$$V = 0.6 \times A \times \sqrt{(2 \times 9.81 \times D)}$$

V = **Volume flow rate**
0.6 = Discharge coefficient for thin wall orifice

A = **Surface area of the orifice**
(πR^2 – π being 3.1415 and R being 50% of the diameter of the orifice in metres)
9.81 = gravity acceleration

D = **Depth of water above the discharge hole in m**

Orifice size	Area of orifice - πR^2	Depth of Orifice from (in metres)		
	EG: 3.1415*(0.0125*0.0125) = 0.00049	0.3	0.5	1
		Flow Rate in Litres		
15	0.00018	0.26	0.33	0.47
*25	*0.00049	0.71	0.92	1.30
30	0.00071	1.03	1.33	1.88
35	0.00096	1.40	1.81	2.56
40	0.00126	1.83	2.36	3.34
45	0.00159	2.32	2.99	4.23
50	0.00196	2.86	3.69	5.22
55	0.00238	3.46	4.46	6.31
60	0.00283	4.12	5.31	7.51
65	0.00332	4.83	6.24	8.82
70	0.00385	5.60	7.23	10.23

***Example of Flow Calculations**
To calculate the volume flow for a 1m Deep tank through a 25mm Orifice (R = 0.0125m):
$V = 0.6 \times (3.1415 \times 0.0125^2) \times \sqrt{(2 \times 9.81 \times 1)}$ $V = 0.6 \times 0.00049 \times 4.4294$
$V = 0.0013\ m^3/sec$
$V = 1.3\ L/sec$

16. Storm Water –Volume Measurements

Volumetric measurements - Platin

Water depth (From Tank Bottom)	1,500 L	3,000 L	5,000 L	Water Depth (From Tank Bottom)
0 mm				0 mm
100 mm	165 L	355 L	417 L	100 mm
200 mm	393 L	805 L	946 L	200 mm
300 mm	627 L	1,302 L	1,517 L	300 mm
400 mm	884 L	1,814 L	2,145 L	400 mm
500 mm	1,155 L	2,322 L	2,786 L	500 mm
600 mm	1,367 L	2,763 L	3,413 L	600 mm
700 mm	1,528 L	3,045 L	3,972 L	700 mm
800 mm	1,578 L	3,123 L	4,524 L	800 mm
900 mm	1,628 L	3,188 L	4,850 L	900 mm
1000 mm	1,675 L	3,237 L	4,893 L	1000 mm
1100 mm			4,958 L	1100 mm
1200 mm			5,004 L	1200 mm
1300 mm				1300 mm
1400 mm				1400 mm
1500 mm				1500 mm

Otto GRAF GmbH, 28.08.2012

Note: To check volume before installation, refer to chart above for the correct orifice height = volume of detention required in the tank.

Please note that systems larger than 10,000 litre can be achieved. Graf are able to assist with calculations and drawings. Please contact your local Reece Branch for this and any pumping equipment.

17. Product Certification

PRODUCT CERTIFICATION

GLOBAL CERTIFICATION PTY LTD

Certificate of Conformance

Product Standard - AS/NZS 1546.1:2008

Number: 183

Company: GRAF PLASTICS AUSTRALIA PTY LTD

Head Office Address: 23 SUCCESS WAY, HENDERSON WA 6166

Certification Date: 28 OCTOBER 2013

Expiry Date: 27 OCTOBER 2016

Product Certified:

Tank Type	Description	Tank Size	Additional Product Information	Manufacturer & Assembly Sites
Poly underground water tank and collection tank and pump with	Vented inlet type Tee-pic textured moulded underground rainwater reservoir Rainflow™ 1751 litres, AS4020/2070 approved, with SSCB and chemical overflow	Platy 900 L - 1400 litres Platin 1500 L - 2,000 litres Platin 1900 L - 2,500 litres Saphir 600 L - 1000 litres Saphir 900 L - 1400 litres Saphir 1,200 L - 1,800 litres	Tank and tank base thickness 4 mm Total tank weight 75 kg Tank and tank base thickness 5 mm Total tank weight 125 kg	23 Success Way Henderson WA

28 October 2013

Certification Date

Director Signed for and on behalf of Global Certification Pty Ltd

DATE OF ISSUE: 20 March 2013

IAS-ANZ

QUALITY CERTIFICATION AS/NZS ISO 9001:2008

GLOBAL CERTIFICATION PTY LTD

Certificate of Registration

Number: 129

In recognition of the implementation of a Quality Management System conforming to: AS/NZS ISO 9001:2008

Company: GRAF PLASTICS AUSTRALIA PTY LTD

Head Office Address: 23 SUCCESS WAY, HENDERSON WA 6166

Certification Date: 28 OCTOBER 2013

Expiry Date: 27 OCTOBER 2016

Capability in respect of which the organisation is registered:

Design and create Roto Moulds, Design and Manufacture of poly rain water tanks under a product standard.

ANZSIC Codes: 4122

28 October 2013
Certification Date

Tina Wood, General Manager

This Certificate of Registration remains the property of Global Certification Pty Ltd and is granted subject to the terms and conditions of the Contract Application in respect of goods or services described in the Capability in respect of which the organisation is registered.

DATE OF ISSUE: 15 October 2014

PO Box 196, Morayfield QLD 4506

IAS-ANZ

Don't risk it, use a licensed plumber.™

Reece. Works for you.™

Call **1800 032 566** or visit **www.reece.com.au** for your nearest Reece store.

The manufacturer/distributor reserves the right to vary specifications or delete models from their range without prior notification. The manufacturer/distributor takes no responsibility for printing errors.