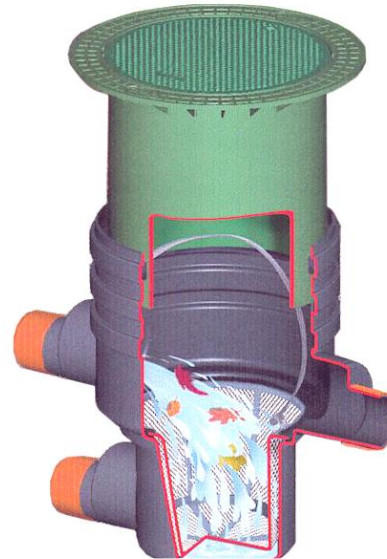


# Installation and maintenance instructions for the GRAF Universal – External Filter 350 – 500sqm

## Graf Universal External Filter

Subject to plumbing requirements the Graf Universal External Filter is suitable for installation with all brands of underground rainwater tanks.



**Graf Universal External Filter**

The points described in these instructions must be followed correctly. If not correctly observed, any right to claim on the guarantee may be refused. For all additional GRAF articles purchased there are separate installation instructions enclosed in the transportation packing.

Any missing instructions must be requested directly from Reece ASAP.

The installation must be carried out by a licensed installer.

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### Disclaimer:

Products in this specification manual must by regulation be installed by licensed and registered trade people. The manufacturer/distributor reserves the right to vary specifications or delete models from their range without prior notification. Dimensions and set-outs listed are correct at time of publication however the manufacturer/distributor takes no responsibility for printing errors.

# 1. General notes

## 1.1 Safety

When working on the installation, the appropriate accident prevention regulations must be followed. For safety reasons, especially when installing a tank, it is important that a second person is present.

Furthermore, when carrying out assembly and installation work, inspection, maintenance and repairs, all work regulations and norms must be followed. You will find the advice in the appropriate sections of these instructions.

The installation of the system and/or single equipment parts must be carried out by a licensed installer.

The complete system must always be out of operation and guarded against unauthorised use when carrying out work on the plant or parts of the system.

The tank cover must always remain closed except when working in the tank, otherwise there exists a very high danger of accidents. The seating and condition of the cover must be checked on a regular basis.

The GRAF Company offers an extensive range of accessories that are all compatible with one another and may be used to construct a complete system. The use of other manufacturers' accessories can impair the function of the system and liability for any resulting damages will no longer be covered under the guarantee.

## 1.2 Labelling/Tagging obligation

All pipe work and outlets of the water systems are to be labelled with the words "**Rainwater or Non Potable in accordance with AS/NZ 3500.1.**" either in words or graphically, so that after years of use, an accidental connection to the drinking water system is prevented. Even when correctly labelled it may possibly be mistaken, for example by children. For this reason, all the outlets of the systems process water must be fitted with vandal proof tapware.

# 2. Installation requirements & performance specifications

## 2.1 Universal – External Filter pedestrian weight resistant

- The Filter with the green telescopic attachment and cover may only be installed in garden areas that are not traversed by traffic.
- The amount of short-term load of the polyethylene cover is max. 150 kg, the long-term area load max. 50 kg
- The maximum installation depth to the filter bottom is 1050 mm.
- Roof areas provided with a pipe connection of DN 100 = 350 m<sup>2</sup> and for DN 150 = 500 m<sup>2</sup>.
- 100% water yield (ideal for small roof areas)
- Variable installation depth (570mm – 1050mm)
- Lockable, child proof cover
- Minimum height offset (270mm) between inlet and outlet
- Filter insert mesh 0.35mm

## 3. Transport and storage

### 3.1 Transport

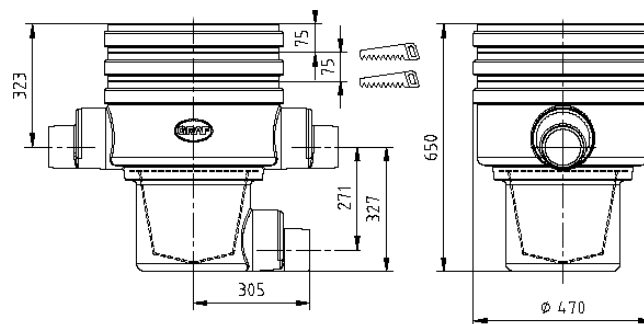
During transport the filter must be well secured against slipping or falling. If the Filter is to be secured for transportation with webbing straps, it is to be ensured that the filter remains undamaged.

Stress and excess loading caused by impact are to be avoided. Under no circumstances is the filter to be rolled or slid over the ground surface.

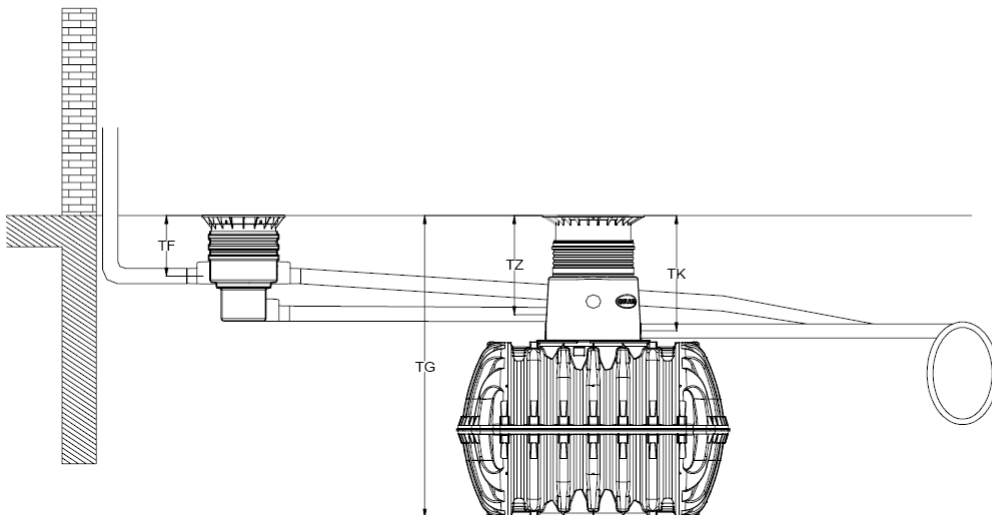
### 3.2 Storage

Any temporary storage of the filter must be on an appropriate level surface without sharp objects. During the storage it is important to avoid damage caused by the surrounding environment or foreign objects.

## 4. Technical data



### 4.1 Graf External Filter Installed on a Graf



| Tank size | TFmin | TFmax | TGmin | TGmax | TZmin | TZmax | TKmin | TKmax |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2700 L    | 300   | 750   | 2250  | 2600  | 595   | 945   | 760   | 1165  |
| 3750 L    | 300   | 750   | 2440  | 2790  | 595   | 945   | 760   | 1165  |
| 4800 L    | 300   | 750   | 2670  | 3020  | 595   | 945   | 760   | 1165  |
| 6500 L    | 300   | 750   | 2950  | 3300  | 595   | 945   | 760   | 1165  |

all dimensions in mm

## 5. Excavation, Commissioning and Servicing

### 5.1 Preparation of the excavation

So that sufficient working room is available and the filter can be correctly installed, the surface area of the excavation should exceed the filter dimensions on all sides by approximately 50 mm. The excavation hole must be level and smooth. The depth of the excavation must be measured so that the final installation depth of the filter bottom is at a maximum 1050 mm. The base of the hole requires a layer of smooth sand approximately 10 mm deep.

**Important:** To ensure optimal performance the surface that the filter sits on must be level.

### 5.2 Placing in the excavation and laying the connections

The filter is installed in the prepared excavation and is then connected to the relevant pipes etc.

**Attention:** It is important that all the pipes to be installed have a gradient of at least 1% in the flow direction without sagging or bending downward. An emergency run-off must also be connected so that a congestion or back surge may be avoided.

**Important:** The diameter of the supply pipe = the diameter of the run-off pipe.

### 5.3 Telescope installation

The telescope is pressed into the filter housing from above. For excavation depths < 930 mm the telescopic attachment and in some circumstances, the filter housing must be shortened. It is important to ensure that the inlet pipe is not obstructed in any way by the telescope when installed.

Before pushing in the telescope the profiled sealing ring is placed in the housings recess. The telescope and the sealing ring must be thoroughly coated with the lubricating soap included in the delivery (use no lubrication that is mineral oil based).

**Attention:** If the lubricating soap becomes dry and the telescope becomes difficult to move then there is the danger that the sealing ring will be forced out of its recess. Before filling, the sealing ring must be checked once again that it is seated correctly in position. The telescope must be sufficiently embedded and supported that no forces are transferred to the housing.

### 5.4 Back Filling

**Important:** Before and during the filling, the horizontal position of the filter must be checked. Smooth sand is required as backfill and must be tampered down lightly with a compacting machine or hand held tamper in 30cm layers. Care must be taken during the embedding to ensure the filter is not damaged. To ensure that no forces are applied to the filter housing, the telescope must be well embedded and compacted.

### 5.5 Commissioning & Servicing

Before commissioning and at every inspection, the lifting out mechanism must be positioned at 90° to the inlet so that no large objects such as leaves and twigs can catch on the handle. The straining filter is removed for cleaning and the basket must be thoroughly cleaned with water until all the pores are open. It is advised to clean every 4 to 5 weeks (more often in autumn due to more leaves and twigs) or according to requirements.

The filter strainer basket must be lightly pressed into place taking care that the seal sits precisely after every cleaning.

At the occasion of each inspection, the overflow siphon must be checked and flushed out as necessary.

