

## Instructions for installation and maintenance GRAF Drainstar Filter External

**GRAF Drainstar Filter External,  
suitable for pedestrian loading  
Art. No: 340143**

**GRAF Drainstar Filter External,  
suitable for vehicle loading  
Art. No. 340144**



The points described in these instructions must be adhered to. All warranty claims will expire in the event of a failure to follow the instructions. For all additional articles purchased through GRAF you will receive separate installation instructions enclosed in the transport packaging.

The components must be checked for any damage before installation.

You can download missing instructions on [www.graf.info](http://www.graf.info) or request them from GRAF.

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## 1. General information

### 1.1 Safety

The relevant accident prevention regulations in accordance with BGV C22 must be observed for all work.

Furthermore, the relevant regulations and standards are to be considered during installation, assembly, maintenance, repair, etc. Please refer to the corresponding sections of these instructions.

The installation of the system or individual parts of the system must be carried out by experts.

During all work on the system or parts of the system, the entire system must always be put out of operation and secured against unauthorised reactivation.

The cover must always be kept closed except for necessary work on the filter; otherwise there is a serious risk of accidents. The fit of the cover must be checked regularly. Only original GRAF covers or covers approved by GRAF in writing should be used.

The company GRAF offers a wide range of accessories, which are all coordinated and can be extended to complete systems. The use of accessories that have not been approved by GRAF results in the exclusion of the warranty/guarantee.

## 2. Installation conditions

### 2.1 Drainstar Filter External, suitable pedestrian loading

- The filter with the telescopic manhole and the green plastic cover may only be installed in green areas not traversed by vehicular traffic.
- The short-term load on the plastic cover suitable for foot traffic is maximum 150 kg; long-term surface load is maximum 50 kg.
- The maximum installation depth to the shaft bottom is 1050 mm.
- Connectable roof areas in the case of connection to DN100 = 350 m<sup>2</sup>, for DN 150 = 500 m<sup>2</sup>.

### 2.2 Drainstar Filter External, suitable for vehicle loading

- By using the telescopic manhole (anthracite) and the cast iron cover Class B in accordance with DIN EN 124, the filter can be installed under areas traversed by cars. The filter may under no circumstances be installed under any surfaces traversed by heavy goods vehicles.
- The earth covering above the inlet pipe is at least 450 mm; the maximum installation depth to the shaft bottom is 1050 mm.
- Connectable roof area in the case of connection to DN100 = 350 m<sup>2</sup>, for DN150 = 500 m<sup>2</sup>.

### 3. Transport and storage

#### 3.1 Transport

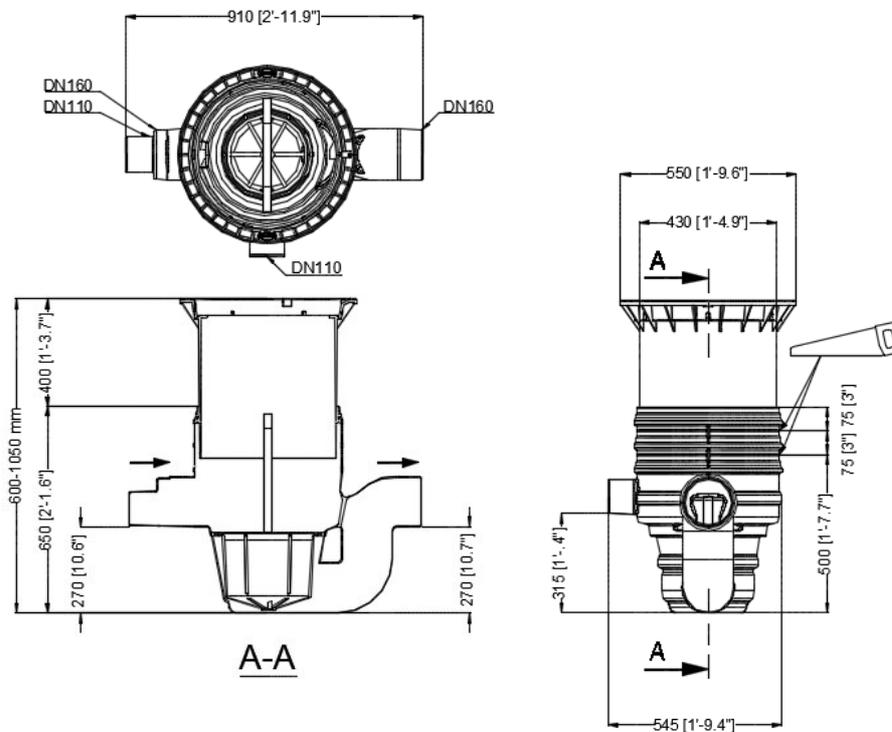
During transport, the filters must be secured against slipping and falling. If the filters are secured with tensioning straps for transport, ensure that the filter remains undamaged.

It is imperative to avoid stresses caused by impacts. Under no circumstances may the filters be rolled or hauled over the ground.

#### 3.2 Storage

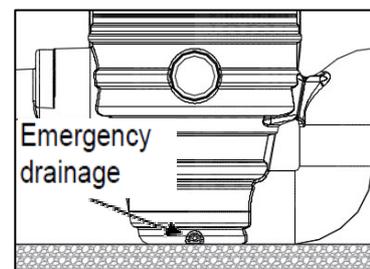
Any necessary interim storage of the filters must be on a suitable, level surface. During storage, damage caused by environmental factors or external influences must be avoided.

### 4. Technical data



**Note:**

There is a borehole with a diameter of 6 mm on each of the two side surfaces of the filter. These boreholes are used for emergency drainage and thus to avoid overflowing the filter.



## 5. Installation and assembly Drainstar Filter External

### 5.1 Preparation of the excavation pit

To ensure that sufficient workspace is available and the filter can be evenly compacted, the base area of the excavation must overtop the filter dimensions on each side by 500 mm. The bank shall be laid in accordance with DIN 4124. The foundation soil must be horizontal and level. The depth of the pit shall be such that the installation depth to the filter bottom is a maximum of 1050 mm. A layer of compacted rounded gravel (grain size 8/16 in accordance with DIN 4226-1, thickness about 100 mm) shall be spread out as a base.

**Important:** The footprint for the shaft must be absolutely horizontal in order to ensure optimum performance.

### 5.2 Insertion and making connections

The filter is inserted into the prepared pit and connected to the corresponding pipes. It is important to ensure that all pipes are installed with a fall in the flow direction of minimum 1 % with no deflection. The emergency overflow should be connected in order to prevent a backflow into the supply line.

**Important:** DIN 1986 must be observed, i. e.  $\emptyset$  Inflow =  $\emptyset$  Outflow.

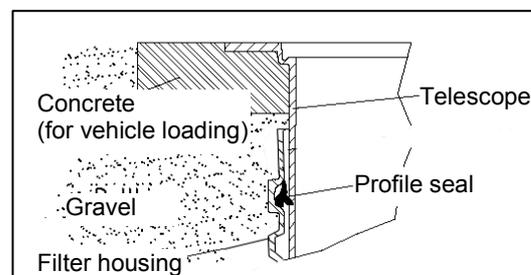
### 5.3 Insertion of the filter basket

The strainer basket must be pressed slightly downwards when inserting, so that the surrounding seal fits snugly. In addition, care must be taken to ensure that the removal device is oriented at a 90 ° angle to the inlet before commissioning and after each maintenance, so that coarse dirt particles do not get caught by the strainer basket handle.

### 5.4 Assembly of telescope

#### 5.4.1 Telescope pedestrian resistant

The telescope is inserted into the filter housing from above. For pit depths < 930 mm the telescope and possibly the shaft housing must be shortened. It is essential to ensure that the incoming pipe cannot be blocked fully or partially by the telescope in its final installed state. Before pushing in, the profile seal is inserted into the seal groove of the housing. The telescope and the seal must be generously lubricated with the soft soap supplied (do not use mineral oil-based lubricants)



**Caution:** If the soft soap dries, the telescope becomes difficult to move and there is a risk that the seal may slip out of the seal groove. Before backfilling, the seal must be checked for a correct fit. The telescope must be sufficiently lined so that forces can under no circumstances be transferred to the housing.



## 5. Installation and assembly Drainstar Filter External

### 5.4.2 Telescope suitable for light traffic

Assemble the telescope as in point 5.4.1. To ensure suitability for traversing by car, the telescope collar must be lined with lean concrete. The concrete layer for the lining must be at least 20 cm wide and about 30 cm thick.

**Caution:** Be sure to use the cast steel cover. Loads imposed by heavy goods vehicles are not allowed. The telescope must be sufficiently lined so that no forces are transferred to the housing under any circumstances.

### 5.5 Backfilling

The horizontal position of the filter must always be checked before and during backfilling. The filter casing is created with layers of round gravel (grain size 8/16 in accordance with DIN 4226-1) to a height of about 300 mm. The individual layers are then compacted with a light compaction device (hand stamper or similar). Avoid damaging the filter housing when compacting. To ensure that no forces are transmitted to the filter housing, the telescope must be well lined and compacted. The cover is then placed on top and closed in a child-resistant manner (Section 1.1 must be observed). **The screw on the lid should be securely tightened so that it cannot be opened by a child!**

## 6. Commissioning and maintenance

The entire system is to be checked at least every three months for water tightness, cleanliness and stability.

The removal device must be oriented at a 90° angle to the inlet before commissioning and after each maintenance, so that coarse dirt particles do not get caught on the strainer basket handle. The strainer insert is removed for cleaning, when the basket is thoroughly cleaned with water until all pores are opened. It is recommended that a visual inspection is carried out every 4 - 5 weeks (in the autumn more frequently due to falling leaves) and cleaning undertaken if necessary. The cleaning intervals may change depending on the dirt or connection area.

The strainer basket must be pressed slightly downwards when inserting after each cleaning, so that the surrounding seal fits snugly.

