Installation instructions and maintenance for the Graf MINIMAX®-Filter internal and external

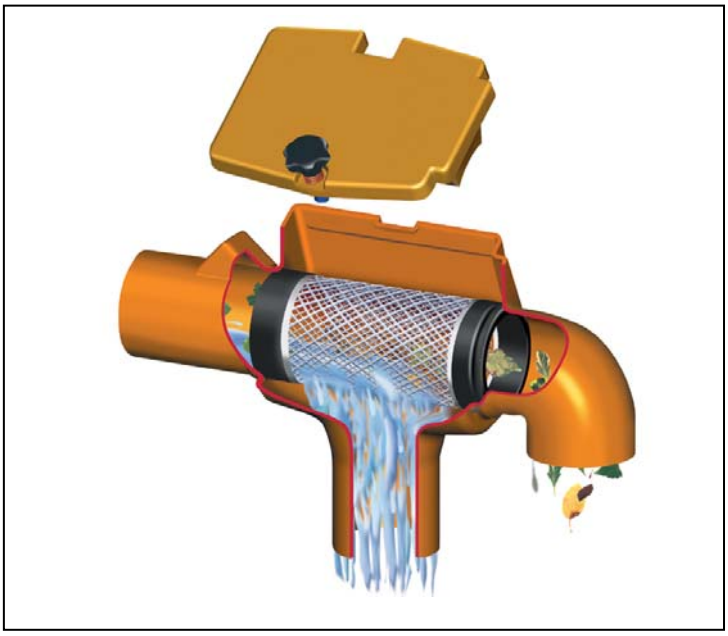
English

MINIMAX®-Filter Internal

Model No.: 340060

MINIMAX®-Filter External

Model No.: 340061



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 us.

A complete check of all the items/components for possible damage must be carried out before the assembly or installation begins.

The installation must be carried out in a professional manner.

Contents:

1. GENERAL NOTES

1.1 Safety

When working, the appropriate accident prevention regulations (in Germany BGV C22) must be followed. For safety reasons, especially when entering the 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 following the enclosed instructions and in a professional manner.

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

Graf 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

The water in these systems is not suitable for consumption or personal hygiene.

All pipe work and outlets of the water systems are to be labelled with the words **"Not drinking water"** either in words or graphically (German norm DIN 1988 Part 2, paragraph 3.3.2.) 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 **child safe valves.**

2. Installation requirements

MINIMAX-Filter Internal

- The MINIMAX®-Filter Internal is suitable for installation in a pilot shaft or in a cistern
- The difference in height between the supply pipe and outlet is 80 mm
- The filter is suitable for roof areas up to 350 m².
- The mesh aperture in the filter cartridge is 0.35 mm.

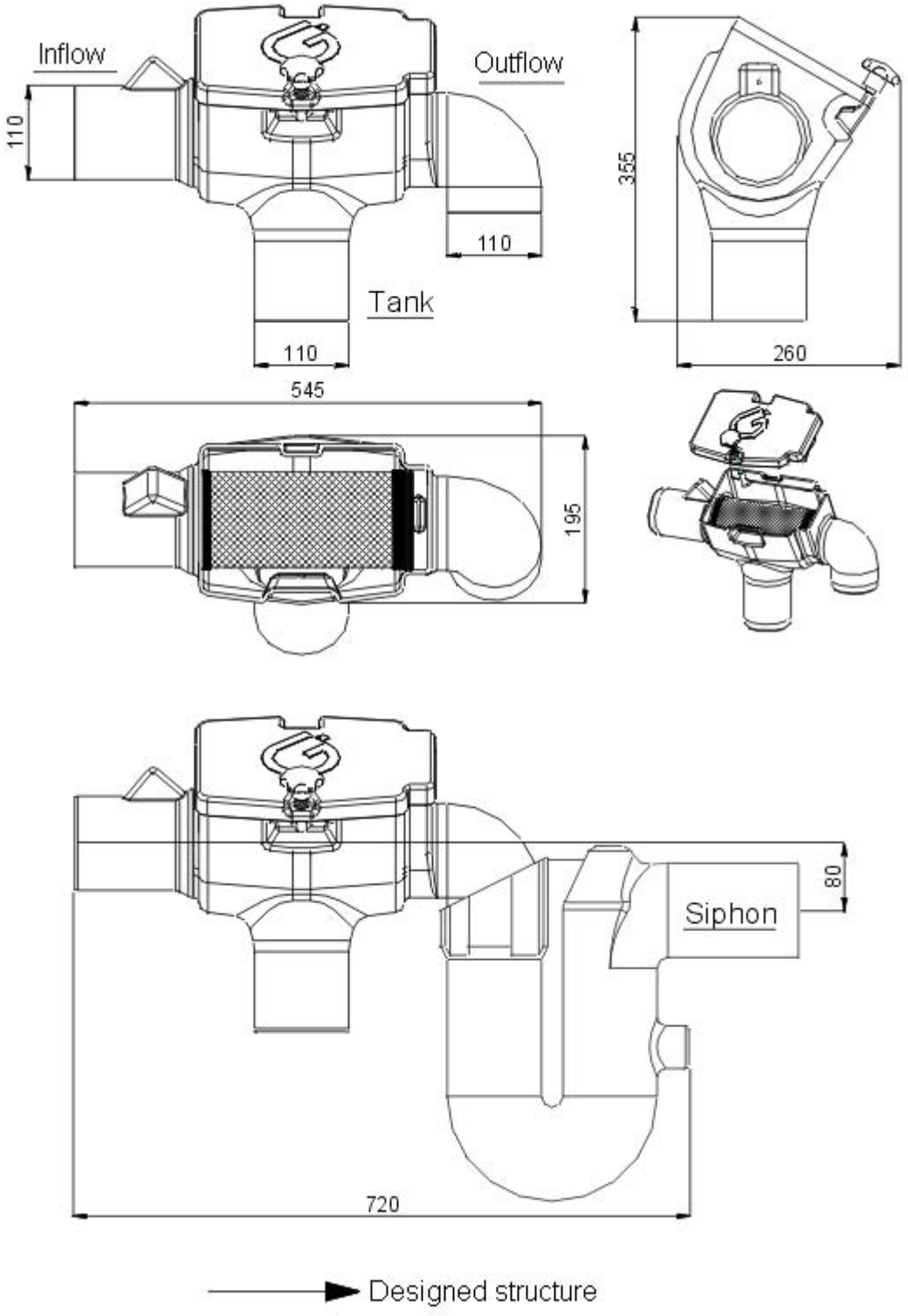
MINIMAX®-Filter External – Pedestrian weight resistant:

- The MINIMAX-Filter External is suitable for installation underground prior to a cistern inlet.
- The MINIMAX-Filter External may only be installed in areas that are not traversed by traffic.
- The difference in height between the supply pipe and outlet is 10 mm
- Stepless installation depth from 570 mm to 1050 mm.
- The filter is suitable for roof areas up to 350 m².
- The mesh aperture in the filter cartridge is 0.35 mm.

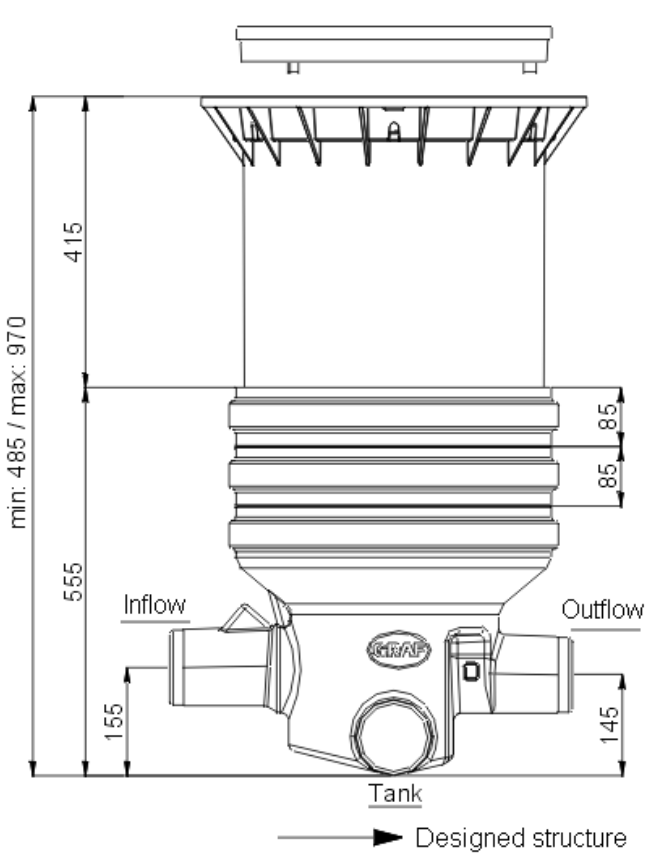
3. TECHNICAL DATA MINIMAX® -Filter Internal

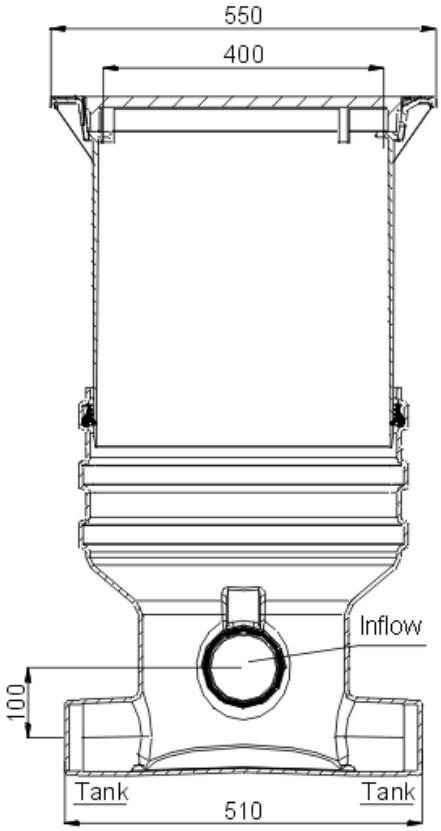
English

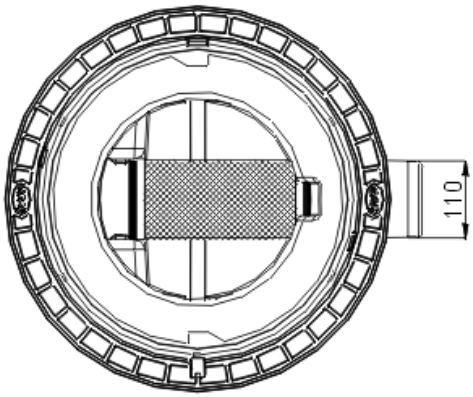
3.1 Dimensions:

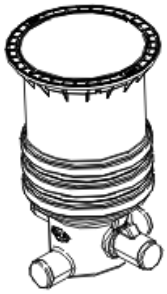


3. TECHNICAL DATA MINIMAX®-Filter External





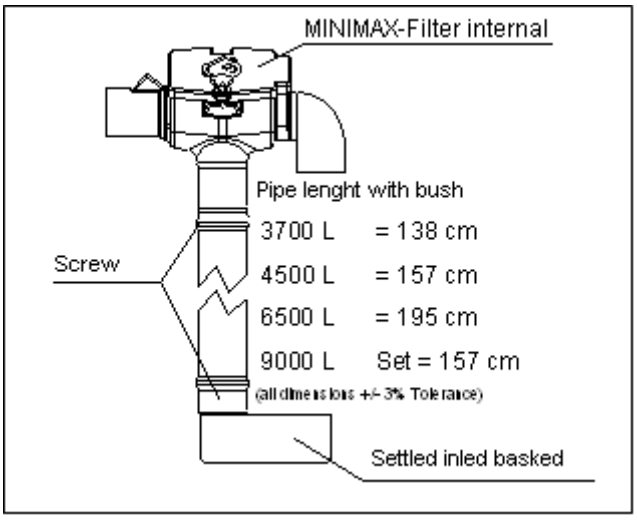




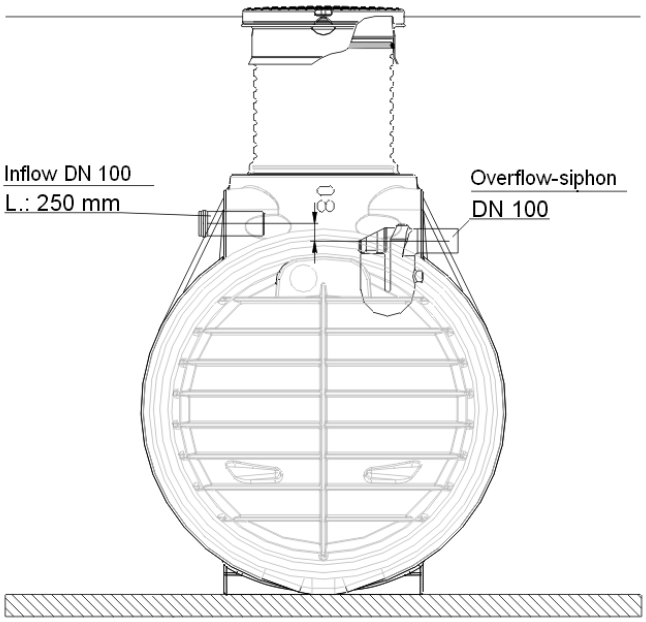
4. Installation and assembly MINIMAX®-Filter

4.1 MINIMAX®-Filter Internal

The MINIMAX®-Filter Internal is prepared as shown in the adjacent depiction. The filter housing is connected via the on site installed canalisation pipe to the stabilising inlet well (included in the MINIMAX add on packet). The couplings should be secured with commercial self tapping screws.

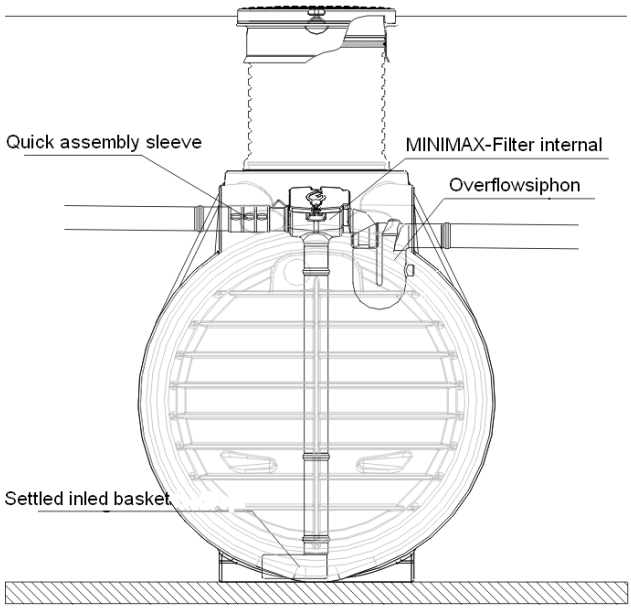


Following this a 250 mm long inlet pipe and an overflow siphon are pushed in to the Columbus underground tank until the end stop position as shown in the adjacent depiction.



Now the prepared MINIMAX®-Filter internal is installed in the tank, the elbow of the overflow from the filter is also connected now to the siphon. The inlet pipe is so to position that it is flush with the filter inlet and then finally fixed in place with the quick assembly collar.

Under no circumstance may a mesh barrier to prevent small animals entering the tube be installed as this will eventually lead to a blockage from debris in the pipe.



4. Installation and assembly MINIMAX®-Filter

4.2 MINIMAX®-Filter External

Excavation

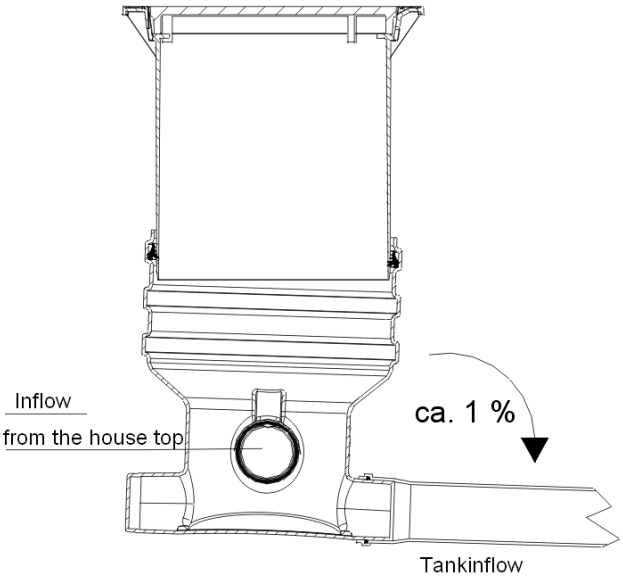
So that sufficient working room is available and the filter can be evenly embedded, the surface area of the excavation should exceed the filter dimensions on all sides by approximately 300 mm.

The excavation slope is according to DIN 4124. The installations excavation must be level and smooth.

The depth of the excavation must be measured so that the maximum installation depth (970 mm from the top surface of the filter) is not exceeded. For an all year round utilisation of the system it is necessary that the water transporting parts of the installation and equipment are installed in a frost free environment, precise data regarding this should be requested from the appropriate administrative authority.

Laying connections

All supply and run off pipes must have a gradient of at least 1% (subsequent settling of the fill materials should be taken into account). The connection is made to the moulded pipe connections on the filter housing. To reduce the flow rate of the water the inlet pipe should be laid level for approximately the last 2 m before joining the filter.



The German DIN 1986 must be complied with, this means Ø inlet and ≤ Ø outlet.

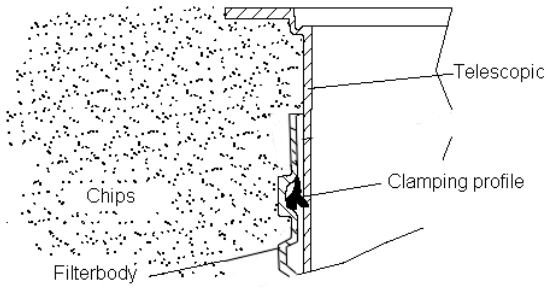
If only one of the two tank supply pipe connections be connected then the filter should be inclined approximately 1% towards the pipe so that no water may remain standing at the opposite connection.

Placing and filling

The filter is to be installed without damage in the prepared excavation. Before back-filling with smooth sand the position of the filter should be checked and then embedded in layers of not more than 30 cm.
Each layer must be well compacted with a hand held tamper. Care must be taken during the embedding to ensure the filter is not damaged. Under no circumstances should powered compacting machines be used. The surrounding back fill must be at least 30 cm wide.

Telescope installation

The telescope is pressed into the filter housing from above. It is important to pay attention 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.



The filter may under no circumstances be traversed by traffic and is only to be installed in green areas.

4. Installation and assembly MINIMAX®-Filter

Telescope suitable for light traffic

To ensure the function in areas traversed by light traffic, the telescope must be embedded around the collar with lean mixed concrete.

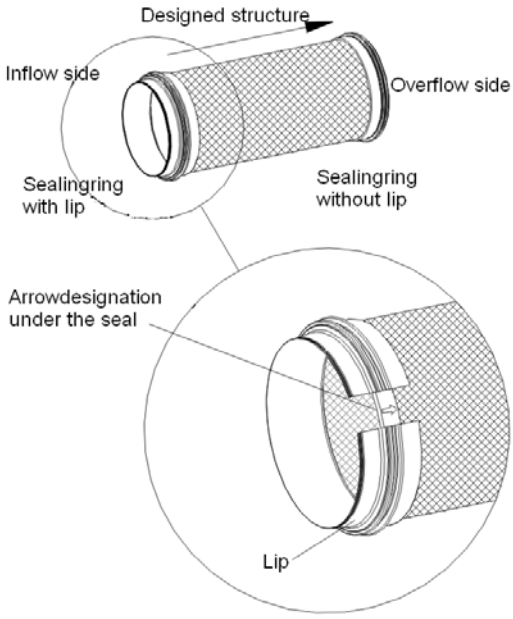
The concrete encasement must be uninterrupted, 20 cm wide and approximately 30 cm deep. **Attention:** It is important to use the cast steel cover. Transport vehicle weight of heavy goods vehicles and machinery is not permitted. The telescope must be sufficiently embedded and supported that no forces are transferred to the housing.

5. Commissioning and Service

5.1 Commissioning

Before putting the system into use the filter sieve surface is to be thoroughly cleaned with asolvent based cleaning fluid. Alternatively the filter sieve may be cleaned in a dish washer (40° - max. 60°). Any dirt that gets into the filter housing during the assembly must be thoroughly removed.

The filter sieve functions only in one flow direction due to the designed structure, the direction is marked on the metal ring with an arrow on the inlet side. When installing the filter cartridge pay attention that the joint seam of the sieve surface is positioned upward.

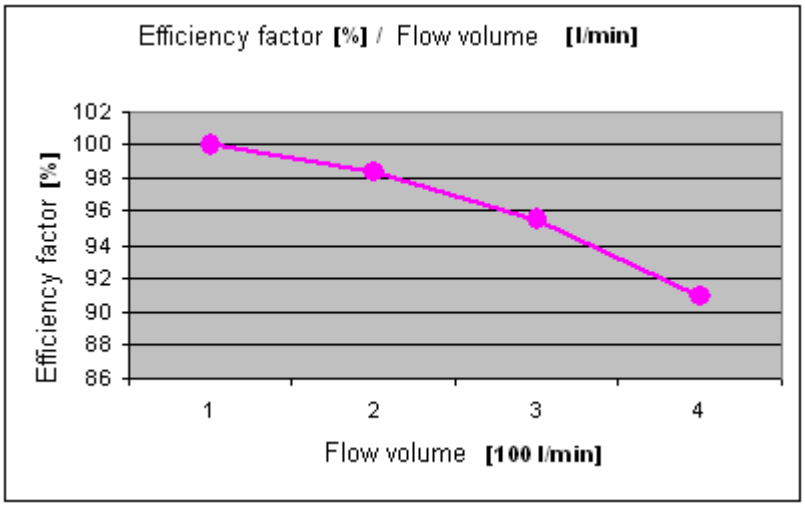


5.2 Service

The complete system is to be inspected at least every 3 months for leakage, cleanliness stability. To ensure the expected water yield is delivered, it is important to inspect and to clean the filter sieve at regular intervals. When carrying out a regular service of the integrated filter it is also required that the overflow siphon is checked and cleaned.

6. Efficiency / Performance

In the case of normal rainfall of 150 l/s, the amount of water to be harvested from a roof area of 150 m² is approxi-mately 2.25 l/s, that is equal to 135 l/min.
The MINIMAX-Filter has with this flow volume an efficiency factor of 99%, this means in real terms that a tank with a volume of 4000 l will be filled in approximately 30 minutes.



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