# Installation and maintenance instructions for GARANTIA SUPRA®-Filter internal and external

**SUPRA®-Filter internal**
**Order No.: 202557**

**SUPRA®-Filter external pedestrian**
**Order No.: 202558**

**GARANTIA Filter package SUPRA**
**Order No.: 202556**

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 GARANTIA.

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

Missing instructions can be downloaded on www.garantia.eu or can be requested from GARANTIA.

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# 1. General notes

## 1.1 Security

The relevant accident prevention regulations according to BGV C22 must be observed during all work. Particularly when walking on the tanks, a 2nd person is required to secure the tank.

The relevant regulations and standards must additionally be taken into consideration during installation, assembly, servicing, repair, etc. Relevant notes can be found in the corresponding sections of these instructions.

During all work on the system or parts of the system, the entire system must always be rendered inoperable and secured to prevent unauthorised reactivation.

GARANTIA offers an extensive range of accessories, all of which are designed to match each other and which can be extended to form complete systems. The use of other accessories may lead to impediments to the system's functional capability, therefore invalidating liability for resulting damage.

## 1.2 Identification 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 conditions

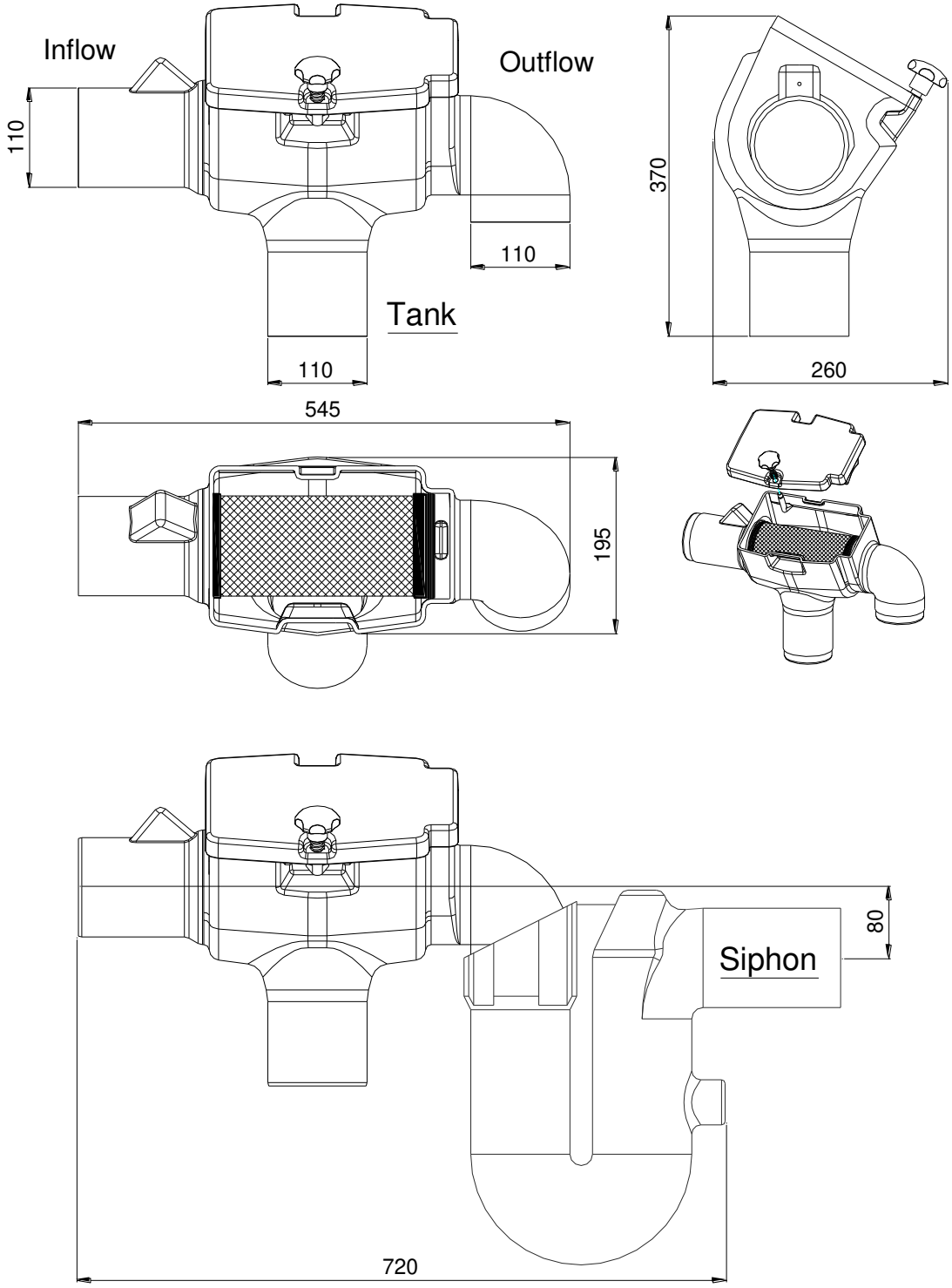
## 2.1 SUPRA®-Filter internal

- The SUPRA®-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 0.5 mm.

## 2.2 SUPRA®-Filter external pedestrian

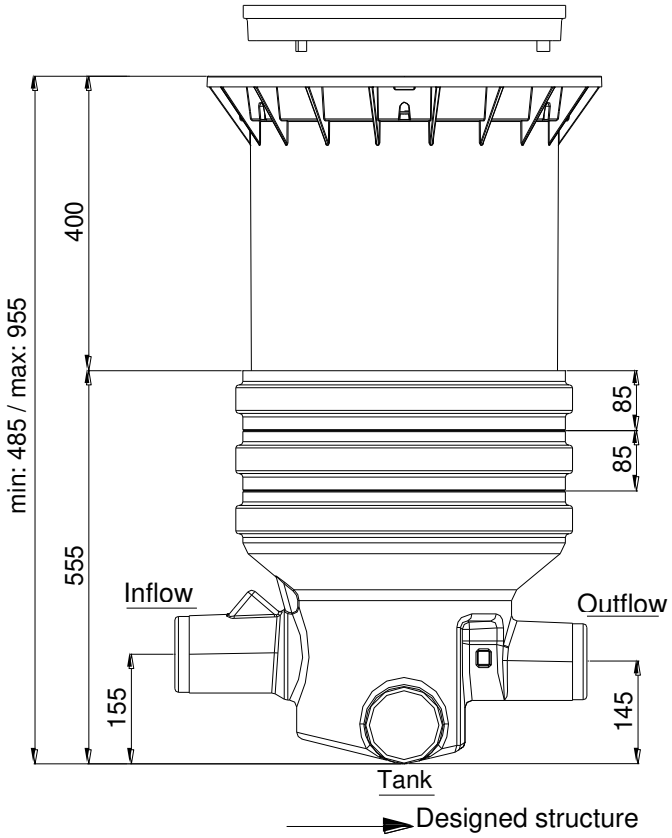
- The SUPRA-Filter External is suitable for installation underground prior to a cistern inlet.
- The SUPRA-Filter External may only be installed in areas that are not traversed by traffic.
- The difference in height between the supply pipe and outlet is 10 mm
- Stepless installation depth from 570 mm to 1050 mm.
- The filter is suitable for roof areas up to 350 m².
- The mesh aperture in the filter cartridge is 0.5 mm.

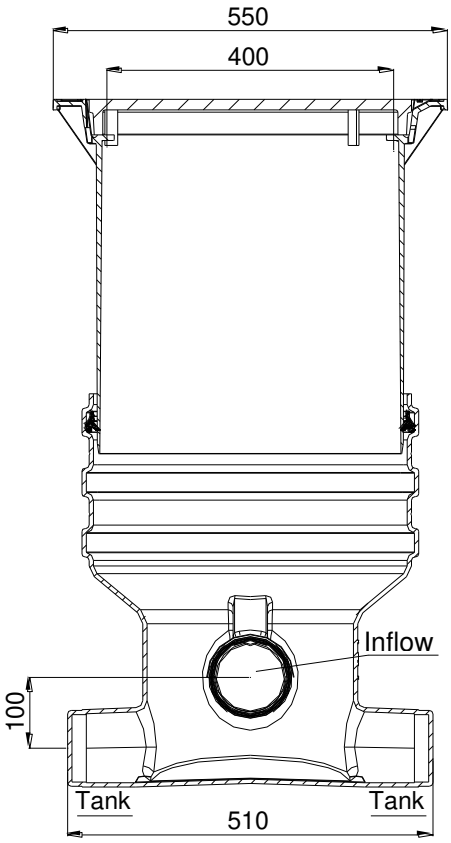
# 3. Technical data SUPRA®-Filter internal

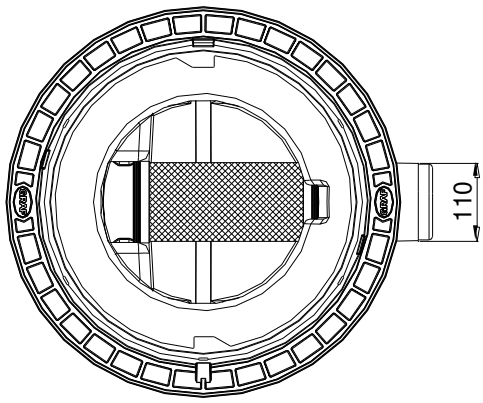


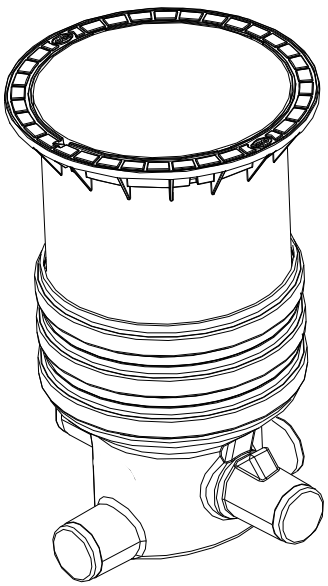

**Designed structure**

# 4. Technical data SUPRA®-Filter external



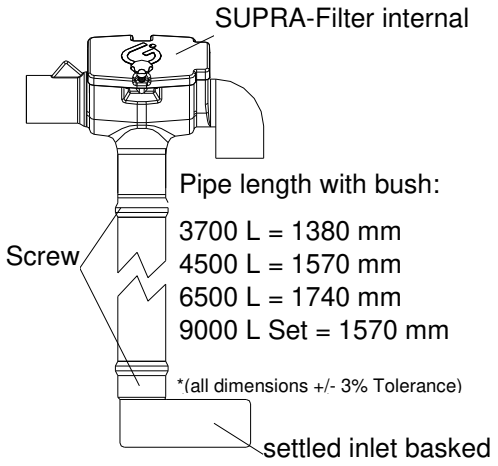



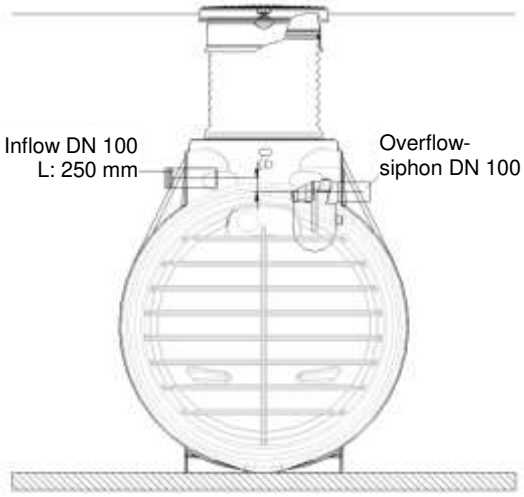
# 5. Installation and assembly

## 5.1 SUPRA®-Filter internal / Columbus underground tank

The SUPRA®-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 Filter package SUPRA). The couplings should be secured with commercial self tapping screws.

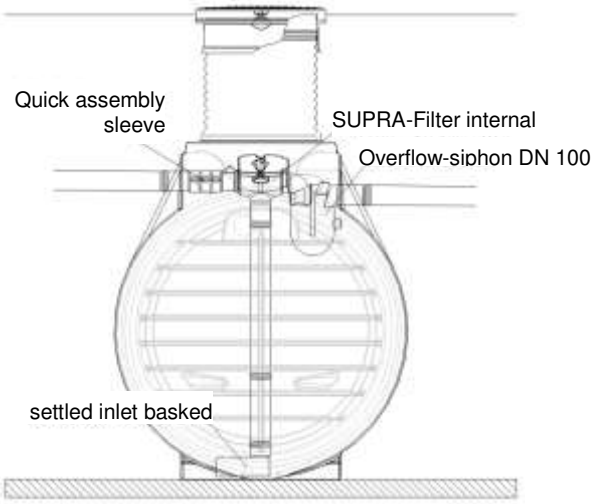



Following this a 250 mm long inlet pipe and an overflow siphon are pushed in to the Columbus underground tank until the end stop position as shown in the adjacent depiction.




Now the prepared SUPRA®-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.

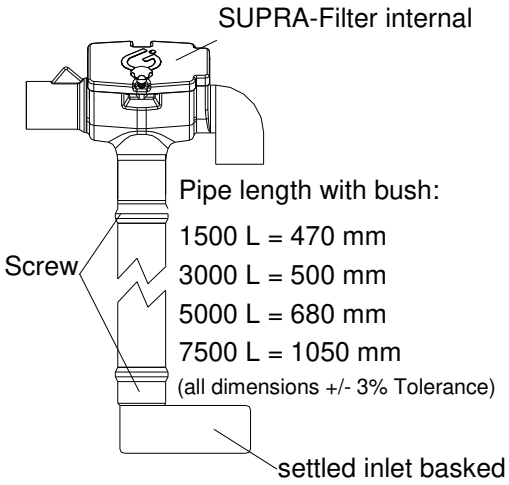
Under no circumstance may a mesh barrier to prevent small animals entering the tube be installed as this will eventually lead to a blockage from debris in the pipe.



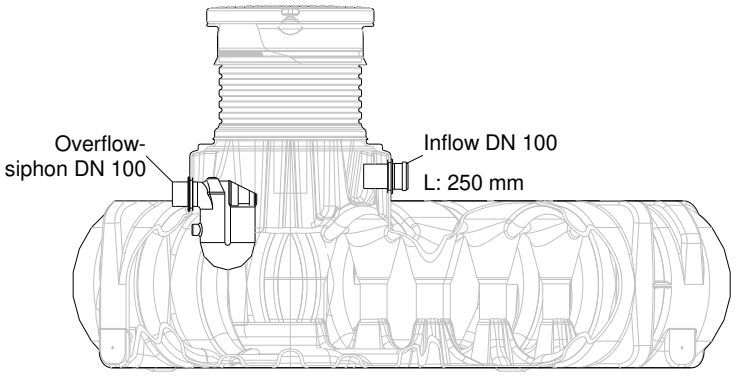
# 5. Installation and assembly

## 5.2 SUPRA®-Filter internal / Li-Lo underground tank

The SUPRA®-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 SUPRA add on packet). The couplings should be secured with commercial self tapping screws.

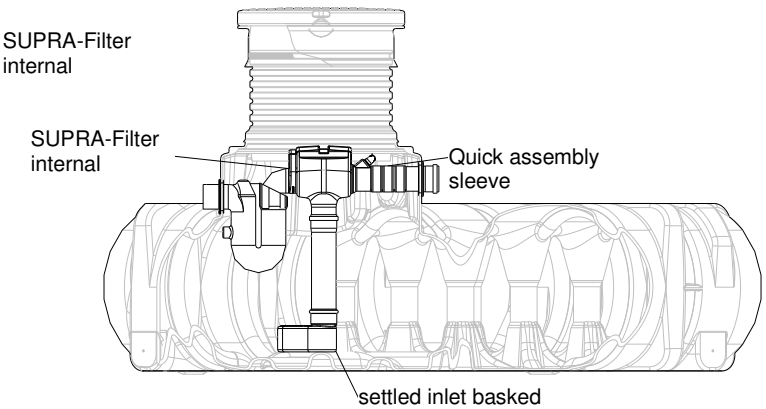



Following this a 250 mm long inlet pipe and an overflow siphon are pushed in to the Li-Lo underground tank until the end stop position as shown in the adjacent depiction.




Now the prepared SUPRA®-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.



# 5. Installation and assembly

## 5.3 SUPRA®-Filter external

### 5.3.1 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.

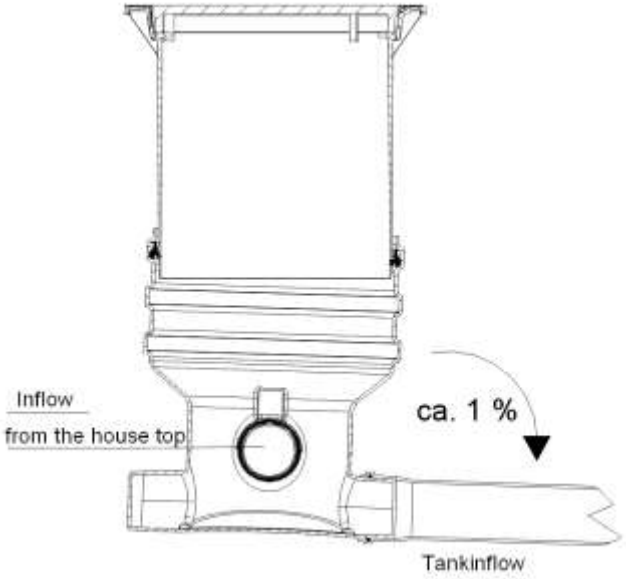
The depth of the excavation must be measured so that the maximum installation depth (970 mm from the top surface of the filter) is not exceeded. For an all year round utilisation of the system it is necessary that the water transporting parts of the installation and equipment are installed in a frost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

### 5.3.2 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.



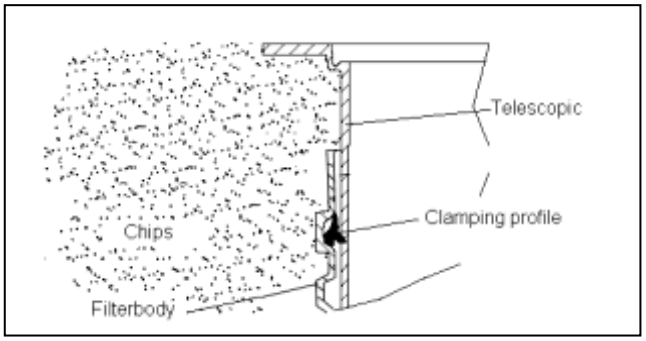

### 5.3.3 Placing and filling

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.

### 5.3.4 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.

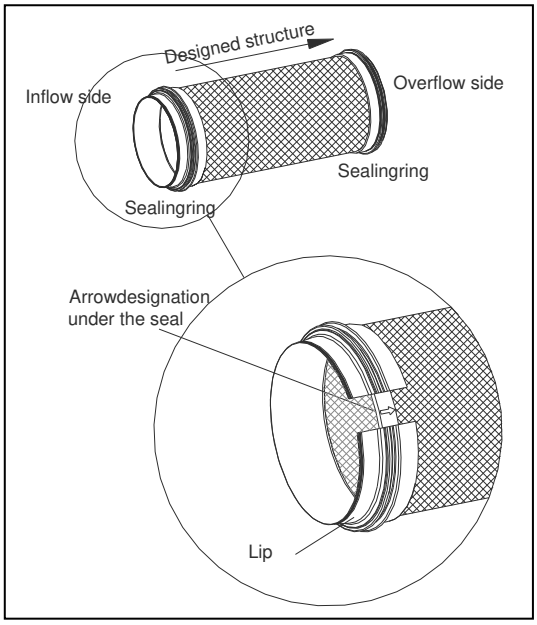
The filter may under no circumstances be traversed by traffic and is only to be installed in green areas.

# 6. Commissioning and Service

## 6.1 Commissioning

Before putting the system into use the filter sieve surface is to be thoroughly cleaned with absolvent 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.



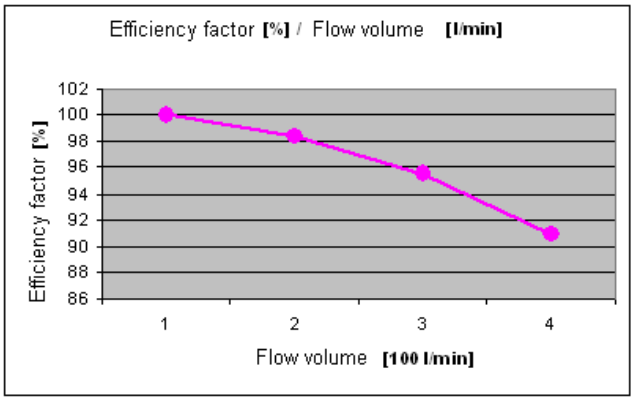

## 6.2 Service

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.

# 7. 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 approximately 2.25 l/s, that is equal to 135 l/min.

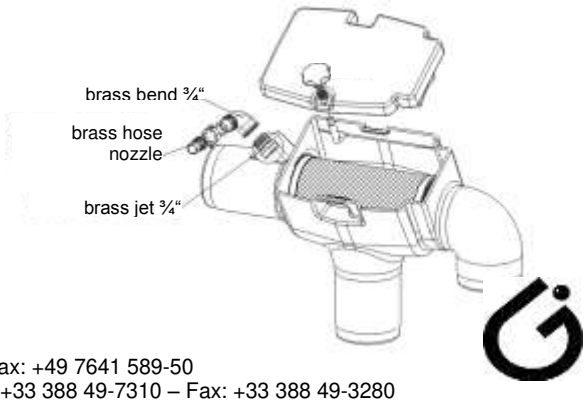
The SUPRA-Filter has with this flow volume an efficiency factor of 99%, this means in real terms that a tank with a volume of 4000 l will be filled in approximately 30 minuets.




# 8. Mounting of cleaning unit

The brass jet ¾“ is to be inserted in the provided aperture at the inlet side of the filter housing and fixed with the brass bend from the outside. Afterwards the

brass hose nozzle is to be screwed on with a union nut and connected with the hose (provided by customer). The hose is conducted through the empty conduit to the pump and linked with the pressure line on the pressure side after a cut-off cock.



**Notes**