

## Description:

Rainwater filter for bigger roof areas. The 3P Volume Filter has to be installed in a pilot shaft (Ø 1000 mm). Normally standard concrete shafts are used. The filter can be delivered to the site yet pre-assembled in the shaft.

Two step cleaning system, therefore high level of filtering efficiency, independent of flow rate.

Due to the steep inclination of the filter cartridge the dirt is continuously cleaned away into the sewer. The connection to the sewer is installed at the shaft. The dirt falls down on the bottom of the shaft and is washed away with the next strong rainfall.

Relative connection capacity according to DIN 1986: for roof areas up to 1347 m<sup>2</sup> at a rainfall intensity of 300 l/(sxha)

Because of a Bypass-Installation a bigger area can be connected.

Inlet rainwater: DN 200  
 Outlet to storage: DN 150  
 Outlet to sewer: DN 200

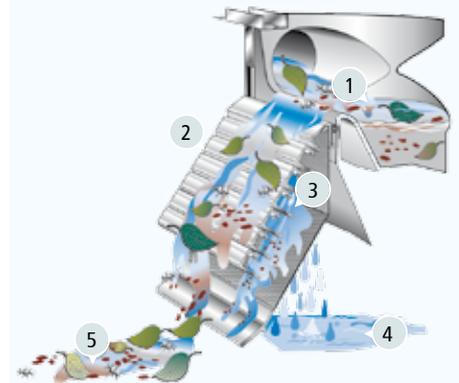
Height difference between inlet and outlet: 320 mm

The filter has to be cleaned depending on the contamination 1 - 2 times during the year



## How it works:

1. The incoming rainwater is backed up in the collection pan and is then equally distributed across the cascades = principle of overflow
2. Pre cleaning through the cascades, coarse dirt particles are led across the primary filter cascades directly to the sewer
3. Pre-filtered water then flows over the secondary filter sieve (Mesh size 0,4 x 1 mm), due to the special mesh structure and the steep inclination of the sieve, any dirt falls directly down onto the bottom of the shaft, in case of heavy rainfalls, the filter has more loss, as the water washes away the filtered dirt into the sewer
4. The cleaned water is being absorbed in the lower collection pan and directed through a tube DN 150 into the storage
5. Dirt goes to the sewer through the shaft



## Technical Data:

Filter according to DIN 1989-2, Typ C

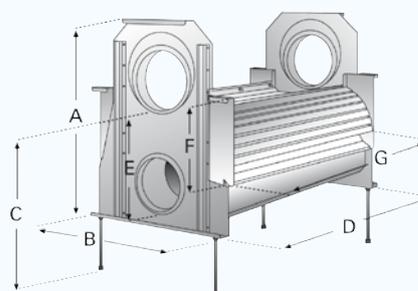
Inlet rainwater: DN 200  
 Outlet to storage: DN 150  
 Outlet to sewer: DN 200

Height difference between inlet and outlet: 320 mm

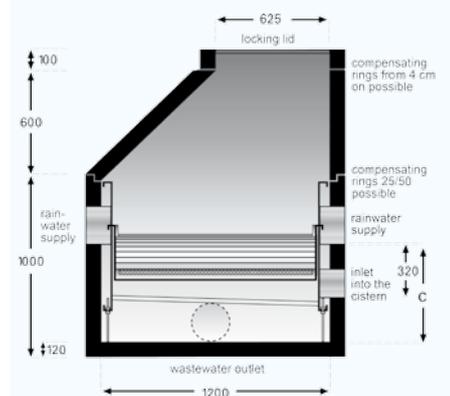
Material Filter corpus: Stainless steel 4016  
 Material Filter sieve: Stainless steel 1.4301  
 Mesh size: 0,4 x 1 mm

Legs = Thread rods M10 with screw nut made of stainless steel, Length 250 mm

Weight: 24,2 kg



A 670 mm  
 B 540 mm  
 C 580 mm  
 D 390 mm  
 E 320 mm  
 F 275 mm  
 G 320 mm



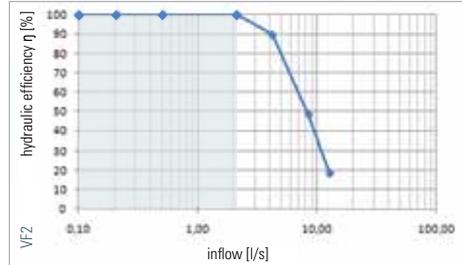
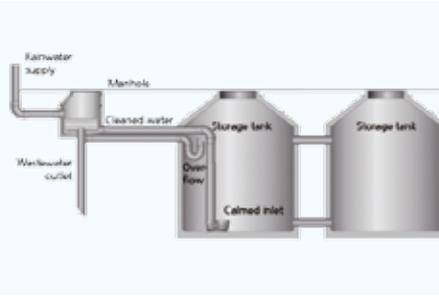
### Example 1:

Installation of the filter in a pilot shaft



### Example 2:

Installation of the filter in front of several concrete tanks which are situated in a row



Source: Prof. Dr.-Ing. Mathias Uhl Muenster University of Applied Sciences

80% of the average intensity of rainfall in Germany is under 15 l/(sxha), resulting a volume flow rate of 2,02 l/s with a roof area of 1347 m<sup>2</sup>.

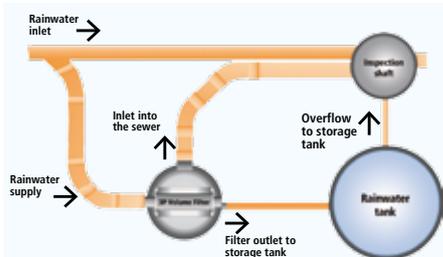
Diameter of tube	maximum flow rate	connectable area max. 200 l/(sxha)	connectable area max. 300 l/(sxha)
DN	l/s	m <sup>2</sup>	m <sup>2</sup>
200	40,4	2020	1347

### Text for invitation of tenders:

Pos.	Quantity	Article	Price in €
1.1	_____	3P Volume Filter VF2 Filter for the installation in a pilot shaft (Ø 1000 mm) Inlet rainwater: DN 200, Outlet to storage: DN 150 Height difference between inlet and outlet: 320 mm Filter inserts with integrated filter sieve: 0,4 x 1 mm, Material: stainless steel Connection capacity according to DIN 1986: for roof areas up to 1347 m <sup>2</sup> at a rainfall intensity of 300 l/(sxha)	_____
1.2	_____	Concrete shaft for 3P Volume Filter VF2 including installation of the Volume Filter VF2 Inner diameter 1000 mm, Height 75 cm, Conus Ø 100 / 60-60 h with Goebel lid resilient up to 5 t Shaft has to be equipped with 3 KG-bushings and Forsheda Seals Inlet rainwater: DN 200, Outlet to storage: DN 150, Outlet to sewer: DN 200 The bottom of the shaft should have a diagonal decline (5 cm) to the channel interface	_____

### Optimal installation:

If the size of the roof or the diameters of the tubes should vary from the specifications / requirements, you can make an installation according to the DIN as demonstrated below.



Packing unit  
3P Volume Filter VF2:  
Pallet: 6 pieces