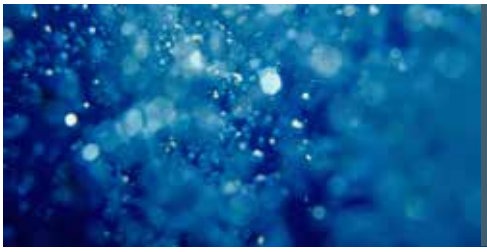


3P Technik Filtersysteme GmbH

3P Hydrosystem 400

Enhanced stormwater filtration

www.3ptechnik.com

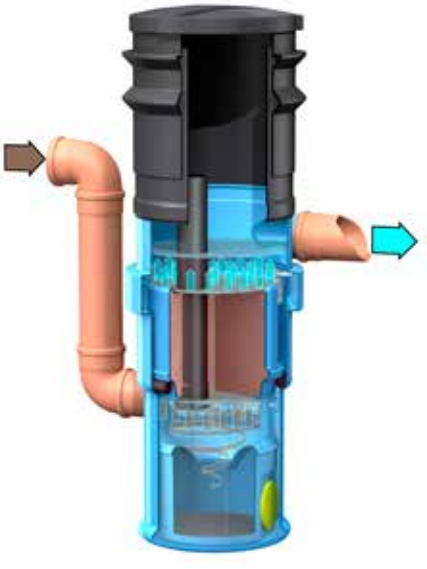
Enhanced stormwater treatment

- Treatment of polluted runoff from roads, car parks and roofs (including metal roofs)
- Underground solution, no additional space required
- Low head loss
- Easy inspection and maintenance
- Filter media retained in a cartridge
- Cartridge exchange interval 3 to 5 years
- Connectable surface area 130 to 200 m²
- Bavarian state approval for metal roofs

Decentralized stormwater treatment is state of the art because it reduces the costs for urban drainage by using source control. The Hydrosystem 400 filtration unit has numerous advantages in comparison with other systems. The system combines a hydrodynamic separator with a filter unit, it is easy to inspect and maintain. There is only low head loss. Filter media is kept in a cartridge, there is no loose material in the system. The filter cartridge has to be replaced in intervals between 3 and 5 years depending on the sites conditions. There is virtually no footprint because the system can be installed in the ground or a rainwater tank.

The filter media removes pollutants including PAH´s, hydrocarbons and heavy metals. Furthermore, it binds phosphorous and ammonium from stormwater runoff. The step treatment train solids and dissolved substances.

The system is ideal for traffic areas, roofs and even metal roofs. Four different filter cartridges for low traffic densities, high traffic densities, normal roofs and metal roofs are available. Highest pollutant levels in stormwater runoff can be reduced to acceptable loads for groundwater and the surface waters. The modular design allows adaption to nearly every site condition.



Technical data

Diameter of the system: 400 mm
Minimum head loss between inlet and outlet: 25 cm
Connectable area: 130 to 200 m² site conditions
Maximum flowrate: 8 l/s, filterable flowrate: 3 l/s, treatment flow rate: 0.5 l/s

Description

Stormwater filter with a dimension of 400 mm. Suitable for contaminated runoff from trafficked areas or roofs. The cleaned water can be discharged directly into infiltration facilities or rainwater tanks. The filter works by an up-flow process with low head loss. In the system the stormwater runoff is cleaned by sedimentation, adsorption, filtration, and chemical precipitation. Incoming water is led down to the basal section of the filter shaft. A hydrodynamic separator promotes sedimentation. Particles settle in the silt trap located below the separation chamber. Above the separation chamber a filter cartridge, the full shaft width such that all water must flow up through the filter media.
The clogging of the filter is reduced due to the upwards flow. The filter cartridges can be easily exchanged. The system is maintained and back flushed normally once a year.

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Modular design

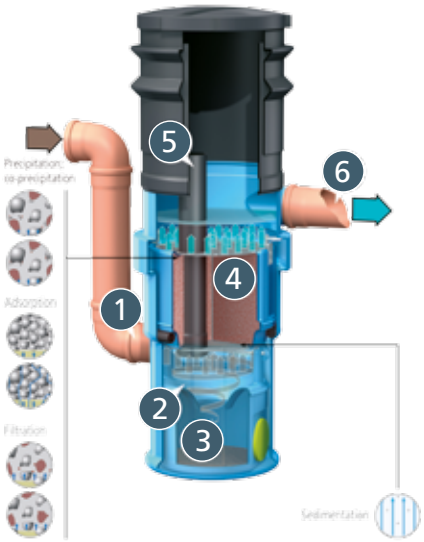
The modular interior of the Hydrosystem 400:

- Four different filter cartridges for site specific conditions
- Filter element traffic for car parks and roads
- Filter element roof for standard roofs without metals
- Filter element metal CU for metal roofs of copper or lead
- Filter element metal ZN for metal roofs of zinc

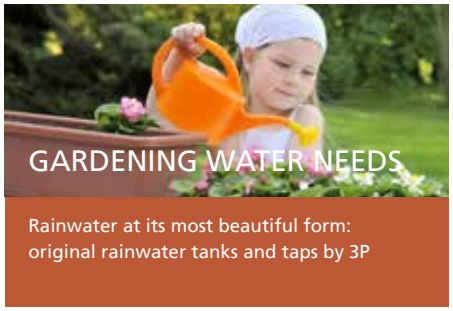
Tests and certificates:

- Approved Bavarian state regulations for metal roofs
- Field test data available
- Tested according to NJDEP TSS testing procedure

Working principle



1. The stormwater runoff is fed into the basal section of the system. The tangential inlet generates a radial flow pattern.
2. The hydrodynamic separator promotes particle sedimentation, particularly of the sand and silt fraction.
3. The sediment is retained in a silt basket below the separator. The silt basket needs to be removeable out at site specific intervals.
4. The water pass through an upflow filter cartridge. Different filter media is available for site conditions. In the filter element filtration, adsorption and precipitation takes place. The filter cartridge can be backwashed.
5. The filter cartridge exchanged by the shaft opening.
6. The treated water leaves the system lifting up through the outlet.



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