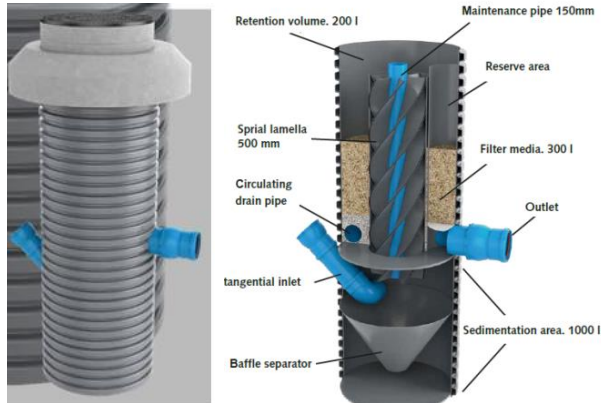


The Aquality Advanced Filter Chamber

(Item No. G70200)

The Aquality Advanced Filter Chamber provides treatment for surface water run-off and meets the highest Mitigation Indices in C753 the SuDS Manual.



Typical applications:

- Car parks
- HGV service yards
- Highways
- Can be used as a part of an integrated water management system allowing surface water to be harvested and reused for non-potable applications

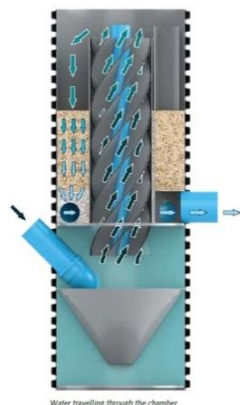
Key Features:

- Meets the 0.8+ Mitigation Indices for the three main pollutant groups - TSS, Hydrocarbons and Heavy metals. Independently tested and approved by DIBt, supported with field test data.
- The spiral lamella in the center of the chamber rotates the water and together with the baffle separator removes more than 90% of Total Suspended Solids (TSS)
- The filter media dissolves the organic and inorganic pollution
- Tangential inlet pipe has an invert of approx. 2 m
- Riser pipe length up to 3 m
- The chamber is 3.2 m deep
- Cone optionally depending on the depth of the cover

Benefits:

- Can be used to treat surface water run-off for reuse
- Concrete cone transfers load to the surrounding soil
- Optimal hydraulic performance and high chemical resistance
- High protection against corrosion
- Long service life before media replacement (every four years)
- Excellent solids retention
- Absorbent agents provide a high retention of dissolved pollutants

Functioning Principles:



The advanced filter system is a unique, compact, and highly efficient filter that uses hydrodynamic and lamella separation combined with filtration, to deal with diffuse pollution from surface water run-off and treat the flow at source. This makes it an ideal component in a water reuse or sustainable drainage (SuDS) solution.

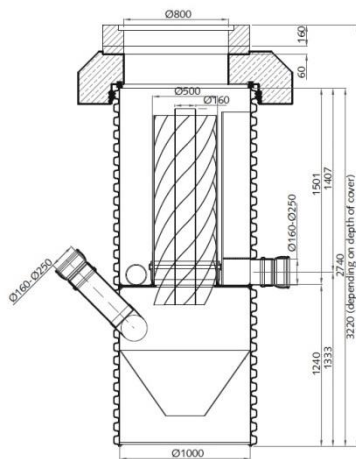
The polluted water enters the filter chamber via the tangential inlet where it is induced to rotate and draws the settleable solids down into the sediment storage chamber. Further particle separation occurs as the water passes up through the spiral lamella in the centre of the chamber. These two processes remove more than 90% of total suspended solids (TSS). The water is then passed through a filter media

where dissolved organic and inorganic pollutants are trapped. The cleaned water is then collected via a perforated pipe and discharged through the outlet to the water reuse tank, surface water sewer or water course. The chamber treats runoff to the 0.8+ Mitigation Indices (C753 The SuDS Manual) for the three main pollutant groups – TSS, hydrocarbons and dissolved heavy metals and is independently tested and approved by the DIBt.

Substance	Inlet Concentration	Outlet Concentration	Treatment Efficiency
TSS	30 kg	1.25 kg	95.8 %
MKW	408 g	2.97 g	> 99 %
Zinc	6.250 µg/l	303 µg/l	95 %
Copper	720 µg/l	5 µg/l	> 99 %

Results to DIBt criteria

Technical data and drawing:



Product name	Aquality advanced filter media
Material	Concrete cone with a PVC riser
Colour	Gray
Connection size Tangential inlet/ Outlet	OD Ø 160- Ø 250
Installation depth	up to 3220
Approval / Standart	Riser according to DIN EN 13476

Maintenance:

Once a year the sediment level in the base of the chamber should be measured and if over 120mm deep then the chamber should be cleaned via the 150mm inspection pipe. The filter media should be replaced every 4 years. The collected sediment and filter media should be removed and disposed in line with local authority and regulatory guidelines.

Specification Clause:

The Advanced Stormwater filtration system shall be by Aquality Trading & Consulting Ltd, 6 Wadsworth Rd, Perivale, London.UB6 7JJ. The system shall have been tested and approved for Stormwater treatment in accordance with DIBt requirements. The system shall be designed to DWA138 to remove TSS to sub 63µg, hydrocarbons and nominated dissolved heavy metals (Zinc and Copper) to the 0.8+ Mitigation Indices in C753 The SuDS Manual.

NBS Specification:

The Aquality Advanced Filter System should be specified in NBS section R17:315. (Section Q37- Green Roof) Assistance in completing this clause can be found in the Aquality Trading and Consulting Ltd entry in NBS Plus or a model specification can be downloaded from www.aqua-lity.co.uk. For further assistance, please contact the Aquality Engineering Team.