

SDS Aqua-Swirl™

Hydrodynamic Vortex Separator

SDS Aqua-Swirl™ is a custom engineered, flow through water quality device that utilises hydrodynamic separation technology to maximise the removal of sediment, debris and free floating oil within surface water runoff.

SYMBiotic™

When connected to a SDS SYMBiotIC™ system, SDS Aqua-Swirl™ provides real time data on a broad range of key operating factors such as pollutant loads and silt capture level.

- *BBA HAPAS approved*
- *HDPE plastic construction*
- *No moving parts*
- *Sealed baffle*
- *Large debris storage chamber*
- *Lifting supports*
- *Compact dimensions*
- *Available in 9 different sizes*
- *Bespoke sizing available*



SDS Aqua-Swirl™ is sized according to water quality treatment flow rates which are based on the initial movement of pollutants into the storm drainage system. This flow rate typically represents approximately 90% to 95% of the total pollutants in the runoff volume.

The treatment flow rate of the SDS Aqua-Swirl™ system is engineered to meet or exceed the local water quality treatment criteria and form an intrinsic part of the SuDS solution train.

| Features | Benefits |
|---|--|
| Available with performance monitoring via SDS SYMBiotIC™. | Provides bespoke suite of operating data, such as silt levels and pollutants, viewable via a secure web portal dashboard with live notifications via email and text. |
| BBA HAPAS certified. | Approved for installation under roads and pavements; adoptable by the Highways Agency. |
| Manufactured from HDPE high strength plastic Weholite. | Offers a durable, light weight and low cost alternative to concrete. Easy and quick to install resulting in substantial cost savings. |
| Specialised sealed baffle. | Delivers the most effective performance of any vortex separator. |
| Internal bypass with pollution retention. | Able to treat localised rain and larger storm events while retaining captured pollutants. |
| NJDEP verified performance. | Verification accepted by UK Government environmental regulators (as cited in the CIRIA C753 SuDS Manual). |
| Single swirl chamber. | Simplifies inspection and maintenance facilities with no special equipment required. |
| Compact dimensions. | Reduces ground excavation and product installation costs. |
| Small footprint design. | Can be retro-fitted with minimal disruption to existing infrastructure utilities or surface features, extending the ability to meet new regulations. |
| Certified installation lifting supports. | Easy installation without the need for large, expensive cranes. |
| Suitable for use during site construction programme. | Can be put into operation prior to completion of the site build, with the inclusion of a planned maintenance schedule. |
| Available in 9 different standard sizes and also bespoke. | Provides greater design flexibility and assists the removal of sediments at a greater rate than comparable systems. |

SPECIFICATIONS

| SDS Aqua-Swirl™ Model No. | Maximum ID pipe connection (mm) BYP ¹ | Chamber Internal Diameter (mm) | Water Quality Treatment Flow Rate NJDEP (L/s) Fine | Water Quality Treatment Flow Rate (L/s) OK110 Coarse | Oil/debris storage capacity litres | Sediment storage capacity m ³ | Aqua-Swirl™ Weight kg |
|---------------------------|--|--------------------------------|--|--|------------------------------------|--|-----------------------|
| AS-2 | 375 | 750 | 16 | 30 | 136 | 0.3 | 300 |
| AS-3 | 500 | 1050 | 31 | 53 | 416 | 0.6 | 700 |
| AS-4 | 600 | 1200 | 40 | 77 | 644 | 0.8 | 1000 |
| AS-5 | 750 | 1500 | 63 | 120 | 1382 | 1.3 | 1100 |
| AS-6 | 900 | 1800 | 91 | 173 | 1439 | 1.8 | 1400 |
| AS-7 | 1050 | 2100 | 123 | 235 | 1987 | 2.5 | 1700 |
| AS-8 | 1200 | 2400 | 161 | 307 | 2612 | 3.3 | 2200 |
| AS-9 | 1350 | 2800 | 220 | 418 | 3596 | 4.4 | 2600 |
| AS-10 | 1500 | 3000 | 252 | 480 | 4164 | 5.1 | 3100 |

¹BYB (Internal Bypass) provides full treatment of the first flush of water while the peak design storm is diverted and channelled through the main conveyance pipe.

Notes:

Details of pollution mitigation indices, head loss and CAD details, standard drawings and Installation Guides available upon request.

The sediment storage capacity has been calculated in accordance with the relevant test protocol and is not a physical maximum; any additional sediment capacity required is achieved with bespoke deeper units.

For assistance in design and specific sizing using historical rainfall data, please contact SDS.

A-S DS/0819