



# ACO StormBrixx®

## CONFIGURATOR – USER GUIDE

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### ACO StormBrixx® Configurator Operation Guide

**ACO recommends this use of this guide along side the ACO StormBrixx® Configurator.**

This guide will help when configuring the optimal functioning ACO StormBrixx® SD or HD system, including tank inlet, outlet, access, inspection, and more.



# 1. Log-in and Project Management

## 1.1 Registration and Log-in

To use the ACO StormBrixx Configurator, you will need to register on the ACO website. Registering with a password allows you to save and edit projects you are working on and ensures that no-one else will have access to your projects. Registration can be done by clicking the REGISTER button on the software landing page:

There is a common registration across the ACO software platform: if you are already registered for ACO QuAD hydraulic design software, ACO QuAD-VFC vortex flow control calculator or ACO StormBrixx Configurator, click LOGIN and log in with your registered email address and password.

## 1.2 New Project

Once logged in, you will see the Project Management ribbon at the top of the software. Here you can start a new project or view and edit previous projects.

Select 'Start a new project' and a pop up will appear where you can enter a project name. When the 'Submit' button is selected the project becomes live on the screen and will appear in your projects list.

Note: the software does not check whether the project name already exists in your project list, so it is recommended that a unique name is used. It is possible to edit the project name once it is submitted to your project list (see 1.4).

## 1.3 Project Management

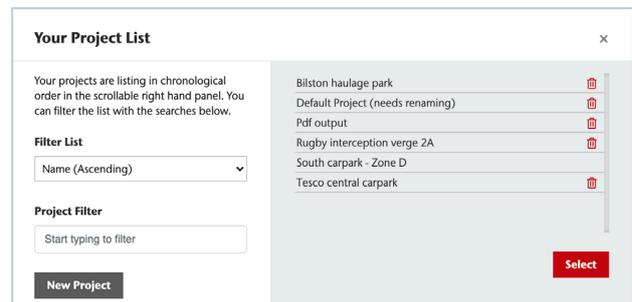
Selecting 'My Projects' will bring up a list of your saved projects.

The 'live' project can be changed by selecting the project that you want to work on and clicking 'Select'.

You can arrange the list of projects by name or age (of creation).

Typing text in the project filter box will reduce the project list to those containing that text. In the example on the right, if you type 2 in the box, only project 'Test 2' will be shown.

Any project, except the current live one, can be deleted by clicking the bin symbol.



## 1.4 Editing Project Names

To edit the name of a previously entered project, if it is not already 'live', select it from the 'My Projects' list.

Click on the project name, in red, and a Project Information form will appear. Edit the Project Name field and click 'Submit'



## 2. Function & Performance

### 2.1 Choose the Function of the Tank

The StormBrixx attenuation/ infiltration system is an underground structure designed to manage excess stormwater runoff on a site, often as part of a Sustainable Drainage System (SuDS). This type of best management practice may be particularly indicated when there is insufficient space on the site to facilitate an above ground solution.

Attenuation allows the peak flow of a storm event to be spread over a period of time, releasing water slowly through a flow control. A variant of attenuation is a retention system where the collected stormwater is held for re-use in, for example, rainwater harvesting. Attenuation and retention systems need to be wrapped with an impermeable membrane.

AttenuationInfiltration allows the collected stormwater to enter subsurface soil. Infiltration tanks store water which gradually releases through geotextile fabrics into surrounding soil.

### 2.2 Choose StormBrixx Product

StormBrixx HD has a higher strength than StormBrixx SD and can be used in higher loading situations. StormBrixx SD can be installed to a maximum depth of 4m and StormBrixx HD can be installed to a maximum depth of 6m.

A layer of StormBrixx HD is 610mm high and a single layer of StormBrixx SD is 914mm high (half height layers of StormBrixx SD are possible)

If unsure of which product to select, or where there are large loads or high water table, please contact the ACO design team: suds@aco.co.uk or phone +44(0)1462 816666.

## 3. Configuring the Tank

### 3.1 Specifying by Tank Dimensions

This function allows you to configure your StormBrixx system to site specific dimensions giving you the ability to manipulate the length width and depth. This function is best suited if you have a specific area in which you wish to position your StormBrixx system.

The Stormbrixx has depth limitations on how many layers each system can be assembled to. The HD system is limited to 4 layers totaling 2.4m in height, the SD system is limited to 3 layers totaling 2.74m in height

Note that the displayed gross volume will not match exactly the product of the three dimensions shown in the graphic as the software makes allowance for the side panels.

### 3.2 Specify by Volume

This function allows you to configure your StormBrixx system to the required volumes that are needed for your project. As there are no specified linear dimensions for your system the program will optimize the most cost effective solution based on your volume requirements.

This will bring up the ‘Select Layer Options’ form which shows the length, height and depth of the different layer options. Select the required dimensions and these will be updated on the ‘Specify by Volume’ screen

If you wish to further alter the optimized dimensions of your StormBrixx system you will need to select the ‘Specify by tank dimensions’ function to have the ability to modify the length, width or depth to suit.

You can change the number of layers in the tank, by selecting ‘Select Options’

Select Layer Options			
Please select a suitable option.			
Length	Width	Depth	Volume (Gross/Net)
99.60m	90.60m	0.5 layer (=0.46m)	4,123.86m³(=4,000.14m³ Net) <span>Select</span>
90.60m	49.80m	1 layer (=0.91m)	4,123.86m³(=4,000.14m³ Net) <span>Select</span>
66.00m	45.60m	1.5 layer (=1.37m)	4,126.16m³(=4,002.38m³ Net) <span>Select</span>
66.00m	34.20m	2 layer (=1.83m)	4,126.16m³(=4,002.38m³ Net) <span>Select</span>

## 4. Excavation Volume

This screen will allow you to accurately calculate the excavation volume for your StormBrixx installation. It will take into account a 0.15m sub base layer and a 0.6m offset working area around the perimeter of your specified StormBrixx system dimensions to allow for sufficient side fill. You will need to enter the amount of top cover that will be placed above your StormBrixx system. This function does not specify the individual elements of the final fill or the pavement design and will default to 0.6m of cover. If heavy duty applications are required you must ensure that you provide enough top cover or structural layers to accommodate the load. The amount of top cover placed over the top of the StormBrixx system will be dependent of the application and traffic type.

The program will calculate the amount of earth that will need to be excavated to accommodate your designed StormBrixx system. This function will also calculate the amount of backfill material that is needed to finish the installation accounting for the correct amount of side fill and top cover. For more information about the correct type of materials for backfill please refer to our StormBrixx Assembly and Installation Instructions, available as a download on the StormBrixx page of the ACO website on our website <https://www.aco.co.uk/products/stormbrixx> and review our typical installation details.

When opening this screen an isometric view shows the excavation dimensions and the volume of backfill material. You can toggle to a plan view to see the excavation dimensions, excavation volume, backfill volume and membrane quantity.

## 5. Tank Inlet Connections

This screen will allow you to place your pipe inlets into the StormBrixx system. A maximum of 3 inlets\* can be selected utilizing 3 methods of connection via our Remote Access Unit, side panel or Horizontal Pipe Connector, or a mix of these. Each inlet method will accept standard pipes from DN 100 to DN 400 connection for both the side panel & Remote Access Unit and up to DN 500 for a Horizontal Pipe Connector.

If a larger diameter inlet is required please contact [suds@aco.co.uk](mailto:suds@aco.co.uk) for further advice.

If you have selected one or more Remote Access Units you will be required to position them in the desired location within the representative grid of your StormBrixx system on a later screen (after the outlet screen).

\* If you require more than 3 inlets to the tank (e.g. a manifold inlet) please contact [suds@aco.co.uk](mailto:suds@aco.co.uk) for further advice.

## 6. Tank Outlet Connections

### 6.1 Outlet Connection

This screen will allow to place your pipe inlets into the StormBrixx system. A maximum of 1 outlet\* can be selected utilizing 3 methods of connection via our Remote Access Unit, side panel or Horizontal Pipe Connector. Each outlet method will accept standard pipes from DN 100 to DN 400 connection for both the side panel & Remote Access Unit and up to DN 500 for a Horizontal Pipe Connector.

If you require more than 1 outlet from the tank please contact suds@aco.co.uk for further advice.

If a larger diameter outlet pipe is required please contact suds@aco.co.uk for further advice.

If 'Infiltration' has been selected in the function & Performance screen, you can choose not to have an outlet: click 'Next' at the bottom left.

If you have selected one or more Remote Access Units as your preference you will be required to position them in the desired location within the representative grid of your StormBrixx system on the next screen.

### 6.2 Inlet and Outlet Location

This screen only appears if one or more Remote Access Units have been selected as an inlet or outlet.

You have **3** of **3** Inlet/Outlets to place



■ Remote Access Unit

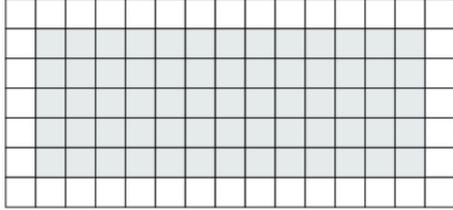
● Remote Access Unit (for maintenance)

↔ Outlet/Inlet pipes

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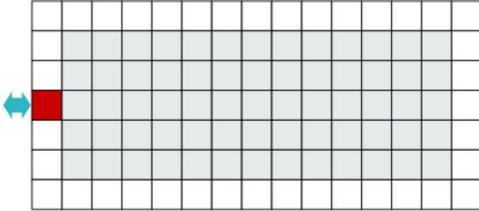
**How many pipe inlet/outlet Remote Access Units will be used for maintenance access?**

You have added maintenance access to **0** of the **3** units

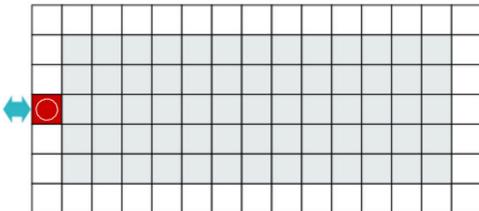


Access units for outlet/inlets can only be placed on perimeter of grid (perimeter of the final tank)

To place a Remote Access Unit in a representative position on the grid, click on the required location and the square will turn red with a blue arrow (inlet/outlet).



A further click on the square will place a circle in the red square, indicating that the top layer Remote Access Unit will also be used for access into the tank.



To remove the Remote Access Unit from the grid, click the square again.

## 7. Tank Access Locations

This screen will allow you to place and position the required access into the StormBrixx system for inspection cleaning & maintenance purposes. This can be achieved using either Remote Access Units or Remote Access Plates,

### 7.1 Remote Access Unit

Access can be gained to the StormBrixx system using a Remote Access Unit. These units can be installed both within the structure and on the outer edges, even placed next to each other if needed. They replace the StormBrixx modules within the system and a module may need to be cut in half to accommodate the Remote Access Unit.

### 7.2 Remote Access Plate

The Remote Access Plate can also be used to gain access into both the StormBrixx HD & SD systems. This plate is compatible with both systems and offers the same access options as the Remote Access Unit but does not allow inlet/outlet pipe connections. The Remote Access Plate is secured into the StormBrixx system by removing layered modules underneath the plate to allow free access into the structure. The plate will rest on the top of StormBrixx modules at the top layer of your system and holds in place via the protruding lip around the top edge of each plate overlapping the surrounding modules.

or a combination, to allow jetting & camera equipment as well as a hose from an industrial vacuum truck to remove any sediment build up within the StormBrixx tank.

StormBrixx HD & SD have their own Remote Access Unit available which differ in height to match the characteristics of each system.

- The SD Remote Access Unit measures 594mm L x 594mm W x 457mm H so you will need to install 2 units per layer of StormBrixx SD (at 914mm high).
- The HD Remote Access Unit measures 594mm L x 594mm W x 610mm H so you will only need to install 1 unit per layer of StormBrixx HD (at 610mm high).
- The Configurator will automatically include the required number of access units in the Bill of Materials.

Because the Remote Access Plate needs to be supported on all four sides, it cannot be used at the edge of the tank – it must be at least one module inside from the perimeter – and Remote Access Plates cannot be placed adjacent to each other.

The Remote Access Plate measures 650mm W x 650mm L x 4.7”H.

## 8. Tank Access Options

### 8.1 Extension Shafts

This screen will automatically provide the correct amount of extension shafts based on your earlier input for the cover layer over the top of the StormBrixx within the cavity excavation page. Each individual extension shaft gives a rise of 250mm, and is used to provide a connection between the Remote Access Unit/Plate and the finished level. The extension shafts can be cut/trimmed down to suit the exact height to match the finished level.

### 8.2 Access Covers

You will then be prompted to select your desired ductile iron cover. ACO offers either vented and non-vented options that are load rated to D400 with the use of a reinforced concrete grade/support ring.

### 8.3 ACO access options not required

If you are proposing to use alternatives to the ACO products select the tick box and this will zero the options above. Deselecting the tick box will re-instate the options (both on the screen and on the bill of materials)

## 9. Ventilation Options

This screen gives you the option to select a ventilation pipe within your StormBrixx system. Ventilation is required in most cases to prevent the build up of pressure.

In the right application, ventilation can also be achieved using a ventilated ductile iron cover, but a ventilated cover should not be used if the surface run off contains any oils or pollutants typically found in a parking lots and roadways.

## 10. Overflow Options

This screen gives you the option add an overflow pipe to your StormBrixx system. Overflows may be required to minimize the risk of the detention or infiltration system surcharging.

## 11. Get Results

Once you have completed all the necessary steps within the StormBrixx online configurator program and pressed 'Get Results' a pdf will be generated with the following information:

Full recap of your project details and your information entered.

- Summary of your StormBrixx tank configuration highlighting product type, dimensions and volumes.
- Breakdown of the excavation volume showing how much earth/material is to be excavated to accommodate the configured StormBrixx system as well as the amount of backfill needed to complete the installation.
- The number of inlets, outlets and access points selected for your configured system as well as the specified locations within the footprint of your system shown on an inlet/outlet grid. The pdf will also show the selected method chosen for each.
- Full bill of materials including quantities, part numbers, and individual component weights and total weight for all parts for the configured system.
- A reference page with dimensions and weights for all StormBrixx components and a sample specification.