

EcoSac Screen Stormwater solution

Sac Screening system, screening down to 25mm with no moving parts



Benefits

- Simple operation
- High capture rate of pollutants
- Low set up and operating cost
- Easy installation/retrofit
- Proven to reduce works maintenance

Features

- Easily accessible sacs
Bag/Net for screening disposal
- Frame support manufactured from durable material
- Flexible design suits different sizes of drains
- No moving part
- Custom make
- Sediments removal



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EcoSac Screen

How it works?

EcoSac Bag/Net is installed in the drain with the angle of 45° to the flow path of the fluid being screened in order to create a vortex. The vortex will lead to indirect screening which is capable of minimizing the binding. Solids are retained in the sac Bag/Net based on size exclusion by using the aperture on it, therefore preventing the downstream problem including clogging, aesthetic pollution of surface water following a storm event.

Two rows of sac Bag/Net will be installed for better screening performance. The EcoSac Bag/Net is fitted with handles to facilitate disposal when the sac Bag/Net is about three quarter full. A calibration ensure that the clean screenings remain in the sac Bag/Net.

A sump basket is installed off the drain where sediments settle. Cleaned stormwater then leaves the basket and flow downstream. The sediments will be cleaned from removable basket unit on a monthly basis.

EcoSac Bag/Net is a sac of Bag/Net screening system, screening down to 25 mm with no moving parts, ready bagged for easy disposal. Being of modular design, it can be made to trap and capture the floating pollutants and sediments in stormwater before flow to the water body.

Applications

The primary application of an EcoSac Bag/Net design is to screen stormwater in the drain before it flows to water body, improving the fluency of sanitation system by preventing clog. Proven to dramatically reduce maintenance cost on such application, the low cost, highly efficient EcoSac screen has become a “backstop” for a number of other applications.

High efficiency, low cost, simple EcoSac Bag/Net provide a perfect solution for screening stormwater overflows, preventing unsightly pollutants from being discharged into surface waters.

EcoSac screen are high flexible and have been used for few projects, including

In Malaysia

- Chow Kit wet market (capture chicken feather)
- Sentul wet market
- Ampangan wet market
- Kolam Intan Baiduri



Advantages of EcoSac

Other Accessories

- Lifting handles
- Walkways
- Outlet Protection Grid
- Wheelie bins for collection



Ecosac	Competitors
1.) Manually operated for small units	Cranage required
2.) Do not cause flood with bypass screen.	Cause flood as no bypass and higher weir than free board.
3.) Provide screen size: 25mm x 25mm & 50mm x 50mm.	Screen size bigger than 50mm x 50mm.
4.) Scalable.	Not scalable.
5.) Provide trap sediments sump off line.	No sediments sump for some.

Features

The modular EcoSac Bag/Net design allow them to be installed in most locations and allow them to be retrofitted to almost any configuration. The disposable sac is attached to frame support manufactured in hot-dip galvanised which is corrosion protection under severe conditions. It involves the slider section and fitted with handles for easy removal. Two rows of sac will be installed for better screening performance. When the EcoSac Bag/Net is about three quarter full, it should be disposed of. A calibration ensure that the clean screenings remain in the Bag/Net.

A sump basket is installed off the drain where sediments settle because of the reduced flow velocity. Cleaned stormwater then leaves the basket and flow downstream. The sediments will be cleaned from removable basket unit.

Specification

EcoSac	Frame support size, mm	Sac length, mm	Aperture size, mm	Flow rate, m3/s	Working load, kg	Design load, kg
	500 x 500	600	25 x 25	0.25	30	100
	1000 x 1000	2500	25 x 25	1.00	30	100
	1500 x 1500	2500	50 x 50	1.50	50	150
	1800 x 1500	3000	50 x 50	2.10	50	150

Sediments sump: custom design

*Only used for initial sizing, actual model shall be determined by detailed engineering. Please check with EcoClean Technology Sdn Bhd for your specific needs.

ECOSAC SCREENS

Introduction

Small unit using hand to lift up



Ecosac screens are manufactured using high quality HDG materials to form the fixed framework secured within the chamber, and the removable Sac holders, with fixings used throughout.

Lifting handles manufactured in HDG are fitted to the Sac holder assembly to provide a means of lifting and filter Sac assembly from the chamber for Sac replacement.

A HDG lifting handle attachment has also been provided to make the manual lifting operation as safe as possible.

Using machinery to lift up



Operating Principle

Ecosac, are installed directly into the flow path of the fluid being screened. Solids are retained in the Bag/Net, therefore preventing downstream problems, such as clogging of trickling filters, aesthetic pollution of surface waters following a storm event.

The Ecosac has been proven to reduce works visit frequency, and better distribution of effluent to the filter bed.

Ecosac are fitted with handles to facilitate removal, and when below ground level or mesh flooring we can supply our unique lifting handle attachment to prevent personal strain or injury.

Advantage

- Simple operation
- Low cost
- Easy installation
- Proven to reduce works maintenance
- Improve distribution of effluent to the filter bed
- Wide use of application

Maintenance

Normal routine maintenance to be carried out when the EcoSac is damaged. If the EcoSac is not changed when damaged, screenings will be ineffective and the trash will bypass the screen



To change the EcoSac

As HSE guidelines on manual handling become ever more critical of lifting below foot level. Ecosac have develop a lifting handle attachment to prevent the need of crouching when lifting frame, Sac and handle assemblies from below manhole covers or open mesh flooring. The lifting handle attachment can easily be clipped to the individual frame lifting handles, effectively increasing the handle length to waist height. The Ecosac frame, Sac and handle assembly and can then be removed safely from the chamber without bending or stooping, therefore keeping the risks associated with manual lifting to a minimum.

1. Lift manhole cover.(Not applicable to open top chambers)
2. Lift individual hinged safety grill above the Sac to be removed. (Not applicable to open top chambers)
3. Lift the frame, Sac and lifting handle assembly is by grasping the handle tubes at the top of frame.
4. Remove the securing pins to release the Sac from the frame, depositing the rubbish retained into the bucket.
5. Place back the Sac over the frame ensuring that the Sac seams are positioned at each side of the frame.
6. Insert the securing pins ensuring that the Sac attach to the frame tightly.
7. Refit frame assembly into the unit guide rails ensuring the frame seats into the unit base correctly.
8. Lower the individual hinged safety grill above the cleaned Sac. (not applicable to open top chambers)



Take off the securing pins for maintenance



Lift the frame and sac using suitable macheneries



Depositing the rubbish



Securing pins to release/retain the rubbish



Securing pins to release/retain the rubbish