

ENVIROPOD®

Cost-effective, easily maintained catchpit insert

Stormwater pollution is a leading cause of environmental degradation in New Zealand. Urban existence produces contaminants, which are discharged on to impervious surfaces. When it rains contaminants such as lead, copper, zinc and PCBs are washed from these impervious surfaces into the stormwater system and eventually discharged into harbours, streams, rivers and aquifers.

The EnviroPod® is a proven catch pit insert designed to be easily retrofitted into new and existing stormwater catch pits, requiring no construction or land take. It removes a significant portion of sediment, trash, debris and other pollutants from water entering the stormwater system, and can be installed in either curb inlet, standard pre-cast catch pits or manhole catch pits. Using low-cost passive screening and optional oil-adsorbent media, the EnviroPod® can be customised to meet site-specific requirements with interchangeable polyester mesh screens ranging from 100 to 1000+ micron pore size.

The EnviroPod® is also effective as a pre-treatment device for use in a treatment train with hydrodynamic separators, filtration devices, ponds and wetlands. In many cases, it is often the most practical solution for retrofits.

Independently trialled and tested by City Councils throughout New Zealand and Australia and with the installation in North America, the EnviroPod® Filter is the premiere pit insert.

HOW DOES IT WORK?

As stormwater enters a storm grate or catchpit, it passes over the oil adsorbent pads (optional) and into the screening bag. Litter, debris, and other pollutants larger than the screening bag aperture are captured and retained, while oil and grease are reduced by the oil adsorbent pads. If the screening bag is full or during high flows, overflow is released through the overflow apertures in the frame assembly.



DESIGN AND OPERATION

The Drop-In EnviroPod® is designed to simply insert into the catchpit below the grate and rest on the base of the pit. It consists of a screening bag supported by a filterbox and a structural cage. Modular plastic deflector panels attach to the filterbox and guide the flow of water to the screening bag. The screening bag captures pollutants and allows the water to pass through to the outlet pipe.

Optional absorbent material inside the screening bag captures oil and grease. Openings in the filterbox allow water to bypass the screening bag during high flow conditions to prevent surface flooding.

There are two standard sizes to fit most pre-cast regular and curb entry catchpits. Custom designs are able to be fabricated for non-standard pits.

CAPABILITIES

- Captures sediment, litter, debris and other pollutants before they enter the drainage system
- Fits a range of catchpit sizes – ideal for retrofits
- Easy access – maintenance-friendly design, generally, no confined space entry is required
- Bypasses high flows with no moveable parts
- Adjustable panels allow fine-tuning during installation for a perfect fit
- Independently tested by Auckland University, NZTA, Auckland Council, Tauranga City Council, University of South Australia

Lab test results:

(200 Micron)

= 95%+ Removal of 100 > up to 20 l/sec

(Gross Pollutant bag)

= 95%+ Gross pollutant capture up to 100 l/sec

BENEFITS

- No construction resulting in low costs i.e. the lowest capital cost of any stormwater treatment device
- A range of filter sizes to target gross pollutants to fine sediment
- Hand maintainable options – no need for expensive equipment
- Can be used to easily target heavily polluted areas
- Ideal pre-treatment device for filters, ponds and wetlands or overflow of swales and raingardens
- No confined space entry

MAINTENANCE

The system must be monitored and maintained in accordance with relevant local authority guidelines. EnviroPod® installations vary due to the vast number of catchpit configurations and site conditions. Typically EnviroPod® filters will require maintenance between 3 & 12 months, depending on local site conditions, pit depth and the number of vehicle movements. The frequency of maintenance services should be reviewed at the completion of each service and modified if pollutant loadings deem this necessary. At the required maintenance interval the contaminants need to be removed from the filterbags and disposed of appropriately.

The maintenance crew is responsible for the disposal of debris in accordance with all applicable regulations and is responsible for following all applicable regulations, and Health and Safety requirements.

Contact the Stormwater360 maintenance department at maintenance@Stormwater360.co.nz for more information or to order EnviroPod® bags and oil absorbent pouches.

MAINTENANCE USING A VACUUM INDUCTOR TRUCK OR BY HAND

Maintenance utilising an Inductor truck is the preferred option for cleaning EnviroPod® filters. Hand maintenance is discouraged as it can lead to damage to the filters and has Health and Safety implications with sediments often being highly contaminated. Filters are also capable of storing a large weight of material.

1. Establish a safe working area per typical catch pit service activity
2. Remove grate/access cover
3. Vacuum accumulated debris from the upper portion of the catch pit or by hand maintenance.
Remove the bag from the EnviroPod® with two lifting hooks through the loops on the top of the bag. Excess debris should be scooped out first if the bag is over half-full
4. Remove and inspect the oil absorbent pouches (if applicable) clipped to the inside of the EnviroPod® bag. Replace with new pouches in step 8 if the pouches are dark with oil
5. Vacuum contents from bag. Once most of the material is removed, remove the bag from the EnviroPod® with two lifting hooks through the loops at the top of the bag. Inspect filterbag and repair or replace if damaged or by hand maintenance
Pour the contents of the bag into a disposal container. Inspect filterbag and repair or replace if damaged
6. Remove the stainless steel ring from the top of the bag and rejuvenate the bag by washing using a double cold wash, or waterblast at an approved cleaning site
7. Place the rejuvenated bag in EnviroPod®. CRITICAL – Make sure the loose ends of the stainless steel ring are joined together in the connector tube
8. Re-install oil absorbent pouches (if applicable)
9. Replace grate



CONTACT DETAILS

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