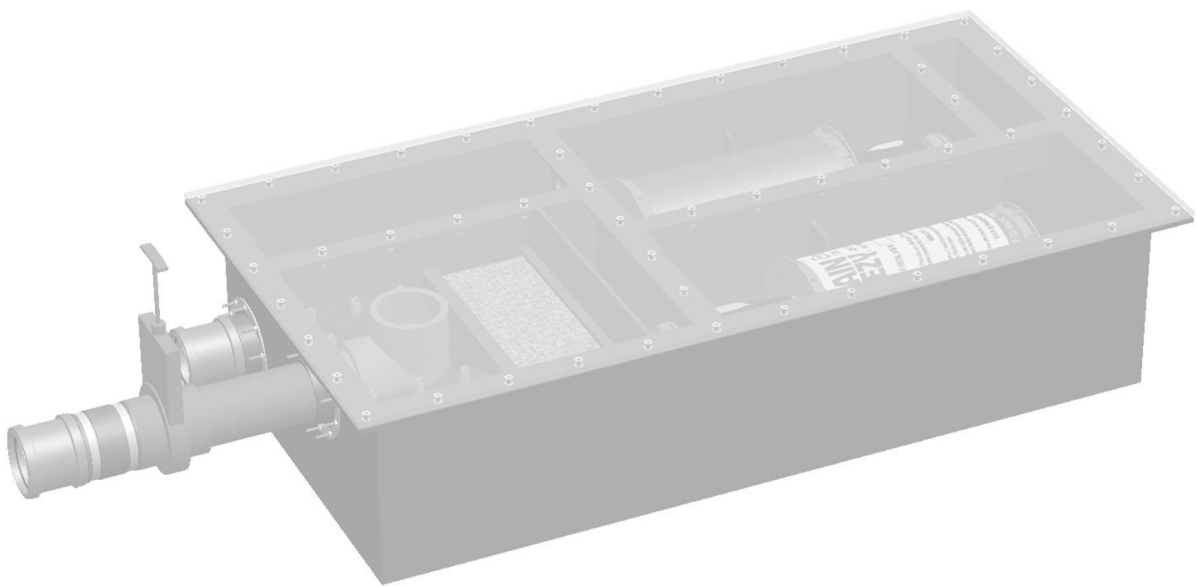




# Midi Filtration System

## Installation & Service Guide

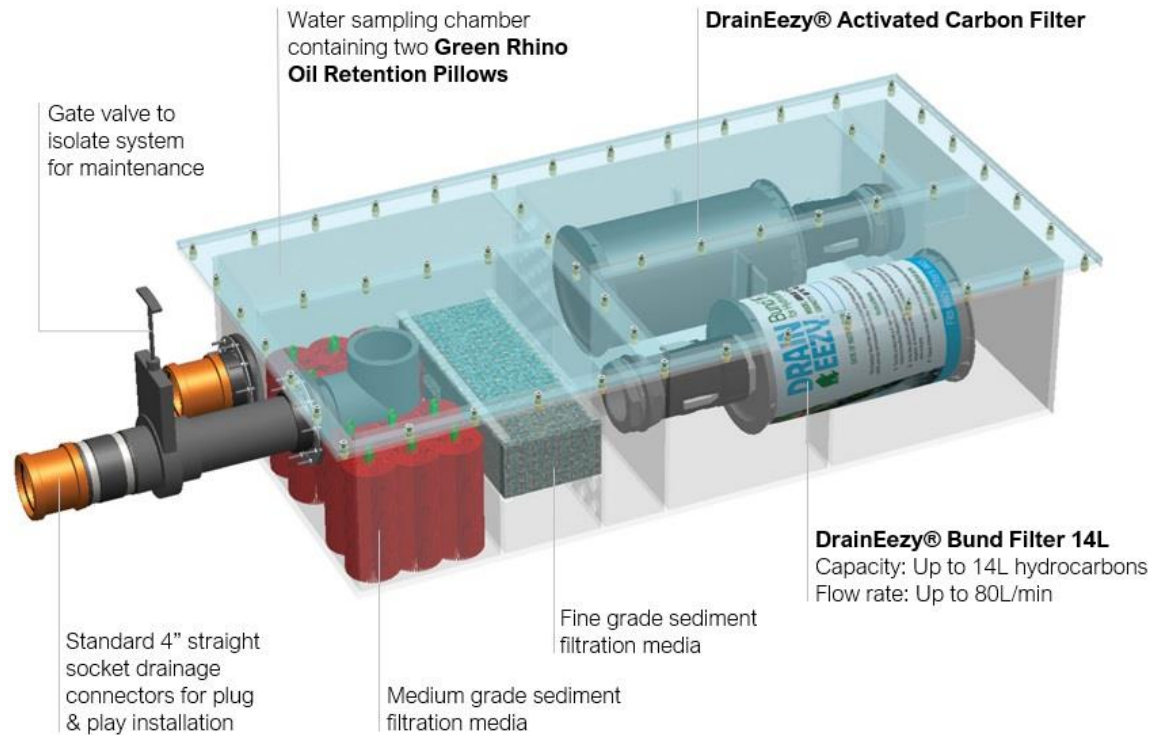


Read this guide:

- To determine if this DrainEezy® Filtration System is suitable for your application
- To plan installation
- For servicing guidelines

## How does it work?

The DrainEezy® Midi Filtration System is a self-contained separator that can be installed at the end of, or within, a site drainage system. It can process up to 80 litres of water per minute and has a capacity of up to 16L of hydrocarbons.



The Midi system comprises a chamber which directs the flow of water through four levels of sediment and hydrocarbon filtration:

1. First, the water passes through two grades of sediment filtration media: medium and fine. These can be removed and washed or replaced (see Service Pack details below).
2. Secondly, the water passes through a DrainEezy® Bund Filter. This filter uses a proprietary blend of smart polymers to absorb hydrocarbons and turn them into a solid substance, trapping them permanently inside the filter. The quantity of smart polymer inside the filter is designed to block the filter once fully activated. This provides a failsafe pollution prevention mechanism in the event that the drainage system is inundated with hydrocarbon pollutants (a spill) or when the filter has reached capacity. The Bund Filter has a capacity of up to 14L of hydrocarbons and will work effectively with a range of hydrocarbons including fuels and oils. It can be easily replaced.
3. Next water exits the Bund Filter and passes through a DrainEezy® Activated Carbon Filter which will remove any traces of hydrocarbons that are left in the water. We recommend that these are changed at the same time as the other filters.
4. Lastly, the discharge chamber contains two Green Rhino Oil Retention Pillows as a final belt-and-braces measure. These pillows contain the same smart polymers used in the DrainEezy® Bund Filter and have a capacity of 1L of hydrocarbons each.

This plug-and-play system utilises standard 4" (11cm) pipe connectors and has no power or internet requirements.

The system is designed to operate to Class 1 (full retention) oil water separator guidelines, discharging water to the environment with a hydrocarbon content of no more than 5ppm. Unlike traditional oil water separators, the system also targets emulsified, dilute and dissolved phase hydrocarbons.

## Installation

The physical characteristics of the Midi system are:

**Dimensions:** 31cm (H) x 86cm (W) x 167cm (L).

**Weight:** 95kg

Under normal circumstances the Midi operates under gravitational pressure and is designed to be installed below ground in an inspection chamber. It can be installed either at the outfall of a drainage system or as an inline processing unit.

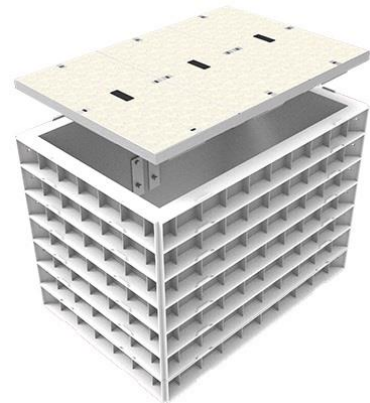
The system is supplied as a sealed unit that has an inlet and an outlet at the same end, both using standard 4" (110mm) pipe connections. You should not need to remove the lid of the chamber before or during installation.

Once a location for the system has been determined, we recommend that an excavation is dug and a concrete based laid with a 30cm sump.

To house the system, you can construct a concrete or block chamber or use a composite interlocking chamber (e.g. Cubis RapidSTACK™). We recommend internal measurements should be no less than 250cm x 150cm.

Once an underground housing chamber and drainage infrastructure are in place the Midi can be dropped into position and connected to the drainage pipework.

The system includes a shut-off valve which should be in the open position during operational use and closed during maintenance or inspection.



- **Note:** If the Midi system is fed from a bund or sump, consider placing one or more Green Rhino **Oil Retention Pillows** in the bund to pre-clean the water. This is a cost-effective way to extend the life of the DrainEezy Bund Filter inside the Midi system.

## Servicing

How often your Midi system will need to be serviced will depend entirely on the volume of sediment and hydrocarbons passing through the system.

As long as water continues to flow through the system fast enough to prevent a backlog then the Midi system does not need servicing. However, if using the system to treat complex hydrocarbons like those found in wood preservatives then we recommend replacing the filters every 18 months to ensure performance.

A permanent back up of water on the inflow side will indicate that the system is blocked and requires servicing. A blockage can be caused in three ways:

- The sediment filtration media have become clogged with silt or other debris. There are three sediment filters – coarse, medium and fine – and these can all be lifted out and cleaned. If hydrocarbons are present, water used for washing should be treated as contaminated and disposed in a hazardous waste bin.
- The DrainEezy® Bund Filter is designed to seal once it has reached hydrocarbon capacity. Flow will reduce substantially as the filter reaches capacity. We recommend that at least one replacement filter is always kept on site to minimise interruptions to site drainage. The filter can be easily disconnected and replaced. **Note that filters can weigh up to 20kg when saturated and could pose a manual handling risk.** Spent filters should be disposed of as hazardous waste. The disposal code for used filters is **EWC 15 02 02**.
- The inflow or outflow may become blocked or a blockage/disruption may occur elsewhere in the drainage run.

To service the system, close the gate valve on the inlet and remove the lid.

If the Midi system is fed from a bund or sump, consider placing one or more Green Rhino **Oil Retention Pillows** in the bund to pre-clean the water. This is a cost-effective way to extend the life of the DrainEezy® Bund Filter inside the Midi system.

## Replacement Parts

If you need to replace the DrainEezy® Bund Filter, we recommend that you purchase a Service Pack which includes replacements for all the consumables in the system.

Code	Description
GRR 03 10 00 HRF	DrainEezy® Bund Filter for Hydrocarbons 14L
GRR 92 50 02 SERV	Service Pack for DrainEezy® Midi Filtration System <i>Includes:</i> <ul style="list-style-type: none"> <li>• 2x Sediment Filtration Media (Medium/Fine)</li> <li>• 1x DrainEezy® Bund Filter for Hydrocarbons 14L</li> <li>• 1x DrainEezy® Activated Carbon Filter</li> <li>• 2x Oil Retention Pillow</li> </ul>

The **Activated Carbon Filter** will not block but we recommend that it is replaced at the same time as the Bund Filter.

Call **01206 299388** or email [sales@greenrhinoglobal.com](mailto:sales@greenrhinoglobal.com) for pricing.