



Bund Filters

Installation & Servicing Guide



Read this guide:

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

How does it work?

The DrainEezy® Bund Filter ports to the side of a bund or tank allowing accumulated rainwater to drain out. As water passes through the filter, hydrocarbon contaminants are removed to an environmentally-acceptable level (<5mg/L). These bund filters use smart polymers to extract and solidify hydrocarbons, trapping them inside the filter permanently. As a filter reaches hydrocarbon capacity it will naturally seal preventing flow until it can be replaced. This delivers a failsafe pollution prevention mechanism in the event that the filter is inundated with pollutants (a breach or spill).

DrainEezy® Bund Filters are most commonly used on transformer bunds but can be ported to any bund, tank or sump.

There are six variants of DrainEezy® Bund Filter:

Code	Product	Fitting
GRR 03 00 00 HRC	DrainEezy Bund Filter for Mineral Oil	1.5" Male Thread
GRR 03 01 01 ERC	DrainEezy Bund Filter for Ester Oils	1.5" Male Thread
GRR 03 00 20 HRC	DrainEezy Bund Filter for Mineral Oil	2" Male Thread
GRR 03 10 03 HRF	DrainEezy Bund Filter for Mineral Oil	4" Male Thread
GRR 03 10 02 HRF	DrainEezy Bund Filter for Mineral Oil	4" Camlock
GRR 03 10 06 ACRF	DrainEezy Activated Carbon Filter	4" Camlock

Installation instructions are provided below for each size/style of fitting.

Filters with Camlock fittings are usually replacement filters for DrainEezy Maxi, Midi or Mini Filtration Systems.

Make sure you have the correct filter for your application.

Planning

- A DrainEezy® Bund Filter needs to be ported onto the side of the receiving bund. Green Rhino can supply a suitable fitting kit which will include a valve for isolating the filter and an elbow so that the filter may be positioned parallel to the bund wall. This means that the receiving bund or tank will require a female threaded fitting.
- It is up to you where you position the bund drainage outlet. Filters are not necessarily used to drain the bund entirely but to prevent overflowing. The bund outlet is often positioned so that the filter can rest on the ground or just above it. Filters have been tested up to 18" of head pressure.
- Filters with 1.5" and 2" male threaded fittings are designed to either rest on the ground horizontally or on a horizontal plane secured by a bracket. A downward angle of no more than 5° should be allowed. These filters are **not** designed to work in a vertical position. Filters with a 4" male threaded fitting can be installed horizontally, diagonally or vertically.
- Green Rhino can provide a Sediment Pre-Filter which is suitable for filters with a 1.5" and 2" fitting. DrainEezy Bund Filters with a 4" male threaded fitting are supplied with a sediment filter that fits into the neck of the filter.

- The effects of surface water discharge need to be carefully considered before situating a filter.
- An adequate working area needs to be provided to allow for servicing and maintenance of the filter.
- The area around the filter entry point should be cleaned of any debris or excess sediment. A debris trap could be fitted to the inside of the bund.

Installation (1.5" and 2" male thread fitting)

1. Check that the threaded fittings on the bund outlet, the filter and the fitting kit (if used) are all the same size. Check that the female fitting on the bund wall is free from burrs.
2. Use the PTFE tape provided to wrap all male threaded fittings. It is important that a water tight seal is provided at each joint.
3. Depending on which accessories you are using, connect units to the bund outlet in the following order: Fitting Kit -> Pre-Filter -> Filter
4. Screw each unit into the receiving port by hand. Tighten until the thread binds to the PTFE tape. If using a fitting kit, close the valve and test joint with a flow of water to identify any leaks. If leaks are observed tighten fittings with a rubber strap or chain wrench or apply more PTFE tape. Ensure that the valve is left in the open position once you are happy with the joint.
5. If using the DrainEezy Pre-Filter, signs on the casing clearly indicate the direction of flow. Make sure the Pre-Filter is installed the correct way round. We recommend that the arm of the Pre-Filter is pointing upwards for ease of access.

Servicing (1.5" and 2" male thread fitting)

- If using the DrainEezy Pre-Filter, you will be able to see how much sediment has been captured. To empty the Pre-Filter, simply unscrew the cap and remove the filter cage. Tap or wash out the sediment and replace.
- Filters require minimal if any maintenance. A filter should be inspected at regular intervals to make sure that water is still flowing through and this is a good opportunity to clean out any silt or debris that may have collected inside the mouth of the filter.
- The smart polymer inside the filter is kept in place by a fine wire mesh (500 micron) at each end. This means that the wider chamber at the inflow end acts as a natural debris trap. Any debris can be flushed out by rinsing the filter from the opposite end. Take care not to spill any transformer fluid in the mouth of the filter when unscrewing it from the fitting kit or bund wall.
- The area around the filter entry point on the inside of the bund should also be cleaned of any debris or excess sediment.
- The flow rate through a DrainEezy® Bund Filter will vary depending on the volume, dilution and rate of hydrocarbons absorbed. At some point the filter will reach hydrocarbon capacity and naturally block. If you start to see water backing up in the bund, check for blockages but otherwise it is time to replace the filter.

- When replacing a filter that has reached capacity, there may be oil in the input end of the filter. Take care not to spill this when removing the filter. Spent filters need to be disposed of as hazardous waste. The disposal code for oil-filled filters is **EWC 15 02 02**.

Installation (4" male thread fitting)

1. Check that the threaded fittings on the bund outlet, the filter and the fitting kit (if used) are all the same size. Check that the female fitting on the bund wall is free from burrs.
2. Use the PTFE tape provided to wrap all male threaded fittings. It is important that a water tight seal is provided at each joint.
3. If using a Fitting Kit, attach this to the bund outlet first before attaching the Filter.
4. Screw each unit into the receiving port by hand. Tighten until the thread binds to the PTFE tape. If using a fitting kit, close the valve and test joint with a flow of water to identify any leaks. If leaks are observed tighten fittings with a rubber strap or chain wrench or apply more PTFE tape. Ensure that the valve is left in the open position once you are happy with the joint.

Servicing (4" male thread fitting)

- Filters require minimal if any maintenance. A filter should be inspected at regular intervals to make sure that water is still flowing through and this is a good opportunity to clean out any silt or debris that may have collected in the Pre-Filter fitted inside the mouth of the filter.
- Simply remove the Pre-Filter, rinse out and replace.
- The area around the filter entry point on the inside of the bund should also be cleaned of any debris or excess sediment.
- The flow rate through a DrainEezy® Bund Filter will vary depending on the volume, dilution and rate of hydrocarbons absorbed. At some point the filter will reach hydrocarbon capacity and naturally block. If you start to see water backing up in the bund, check for blockages but otherwise it is time to replace the filter.
- When replacing a filter that has reached capacity, there may be a significant amount of oil in the neck of the filter which will need to be disposed of. Have a spill tray or container to capture this oil when removing the filter.
- Spent filters need to be disposed of as hazardous waste. The disposal code for oil-filled filters is **EWC 15 02 02**.

Installation (4" Camlock fitting)

1. When replacing the DrainEezy Bund Filter or Activated Carbon Filter in a DrainEezy Mini, Midi or Maxi Filtration System, first ensure that the gate valve is in the closed position.
2. Remove the existing filter, holding it upright by the neck to ensure that no oil or oily water escapes.
3. Connect the new filter.

4. Once the lid of the system has been replaced, reopen the gate valve.

Servicing (4" Camlock fitting)

- The flow rate through a DrainEezy® Bund Filter will vary depending on the volume, dilution and rate of hydrocarbons absorbed. At some point the filter will reach hydrocarbon capacity and naturally block. If you start to see water backing up in the bund, check for blockages but otherwise it is time to replace the filter.
- When replacing the DrainEezy Bund Filters in a Maxi or Midi Filtration System, the DrainEezy Activated Carbon Filters should be replaced at the same time.
- Spent filters need to be disposed of as hazardous waste. The disposal code for oil-filled filters is **EWC 15 02 02**.