



Bund Filter

Installation & Service 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 four variants of DrainEezy® Bund Filter:

- For mineral transformer oil, fuels, engine oils, lubricants and hydraulic fluids (1L and 2.5L capacity)
- For Midel 7131 synthetic ester fluid
- For FR3 natural ester dielectric fluid

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 ball valve for isolating the filter and an elbow so that the filter may be positioned adjacent to the bund wall. Both the filter and the fitting kit will have a 1.5" or 2" male thread connector (depending on the filter). This means that the receiving bund or tank will require a 1.5" or 2" female threaded fitting. You can see details of the fitting kits available below.
- 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 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. Filters are not designed to work in a vertical position.**
- The effects of surface water discharge need to be carefully considered before situating a cartridge.
- An adequate working area needs to be provided to allow for servicing and maintenance of the cartridge.
- The area around the filter entry point should be cleaned of any debris or excess sediment. Ideally a debris trap should be fitted to the inside of the bund.

Installation

1. Check that the threaded fittings on the bund wall, the filter and the fitting kit (if used) are all the same size.
2. If using a fitting kit, we recommend that you fit this to the bund wall before attaching the filter. If connecting the filter directly to the bund wall, instructions are very similar. DrainEezy® Bund Filters have a male threaded connector at each end and can be fitted either way round.
3. Check that the female fitting on the bund wall is free from burrs.
4. Use the PTFE tape provided to wrap the male thread fitting. It is important that a water tight seal is provided at each joint.
5. Screw filter or fitting kit 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 valve is left in the open position once you are happy with the joint.
6. Now connect the Bund Filter to the female threaded port on the fitting kit. Apply PTFE tape to the male thread to ensure a watertight seal. Attach by hand and tighten until thread binds to the PTFE tape. Do not over tighten or use mechanical means to tighten the filter.

Servicing

- Cartridges require minimal if any maintenance. A cartridge 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 smart polymer inside the filter is kept in place by a fine wire mesh (500 micron) at each end. This means that the wider chambers at each end of the cartridge (it can be installed either way round) act 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 hydrocarbons 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 that the bund outlet isn't blocked but otherwise it is time to replace the filter.
- Spent filters need to be disposed of as hazardous waste. The disposal code for oil-filled filters is **EWC 15 02 02**.

Fitting Kits

Green Rhino can provide fitting kits for DrainEezy® Bund Filters. See the table below for details.

Code	Description	Application
GRR035100FITK	Type 1 Fitting Kit – ABS 1.5"–1.5" Male Threaded Fitting	POPULAR Typically used on a concrete banded area.
GRR035101FITK	Type 1 Fitting Kit – ABS 1.5"–2" Threaded Bush	Typically used on a concrete banded area with a 1.5" fitting which requires a Type 2 cartridge (2" fitting) for flow rate or capacity.
GRR035102FITK	Type 1 Fitting Kit – ABS 1.5"–1.5" Male Thread Fitting XL	Typically used on a bund where timber poles are used as an edge with a liner system, and the extended length of pipe passes through the wall.
GRR035150FITK	Type 1 Fitting Kit – S/S 1.5" - 1.5" Male Thread Hex Nipple	POPULAR Typically used on a steel earthed banded area.
GRR035200FITK	Type 2 Fitting Kit – ABS 2"–2" Male Thread Fitting	Typically used on a concrete banded area.
GRR035201FITK	Type 2 Fitting Kit – ABS 2"–2" Male Thread Fitting XL	Typically used on a bund where timber poles are used as an edge with a liner system, and the extended length of pipe passes through the wall.
GRR035250FITK	Type 2 Fitting Kit – S/S 2"–2" Male Thread Hex Nipple	Typically used on a steel earthed banded area.

For drawings of each fitting kit, see our website or email sales@greenrhinoglobal.com.