

Marley Grease Converters capture and permanently transform fat, oil and grease (FOGs) from the wastewater of commercial kitchens, cafes, bakeries and restaurants, allowing them to enter the waste stream after treatment. Independent testing achieved a 99% decrease in FOG.

Features include:

- › Environmentally responsible – converts FOG’s through a process of bioremediation
- › Small footprint models to suit under bench installations
- › Large range of standard models
- › New Zealand made using 304 Stainless Steel
- › Moulded Polypropylene models

\* Independently tested influents and effluent samples were taken from a high turnover commercial kitchen, analysis by Hills Laboratories Ltd achieved a 99% decrease in FOG.

## Material Specifications

### Marley Grease Converter

Body and Lid: 304 Stainless Steel

Lid Seal: Tesa® 61104 6.4mm Closed Cell EPDM Foam Tape

### Endura Grease Converter/ Solids Interceptor/Sediment Trap

Body and Lid: Polypropylene

Lid Seals: Neoprene

## Product Codes

CODE	DESCRIPTION
GC5020WDAL	Grease Converter S/S 165L/hr
GC5030WDAL	Grease Converter S/S 195L/hr
GC5035WDAL	Grease Converter S/S 342L/hr
GC5060WDAL	Grease Converter S/S 390L/hr
GC5080WDAL	Grease Converter S/S 645L/hr
GC5100WDAL	Grease Converter S/S 746L/hr
GCCUSTOM	Custom built units

CODE	DESCRIPTION
GCE35WDAL	Endura Grease Converter 210L/hr
GCE50WDAL	Endura Grease Converter 350L/hr
GCE SOLINT	Endura Solids Interceptor
GCE BASKET	Endura Solids Basket Accessory
GCE SEDTRAP	Endura Sediment Trap

## Product Intended Use

**Grease Converters** – designed to capture and hold Fats, Oils and Grease within the body of the tank so as to allow the bioremediation process time to take place. Bioremediation is simply a process which relies on biological organisms and microorganisms like bacteria to create enzymes that break down the molecular structure of the FOG’s to a point where the bacteria can digest the FOG’s.

**Scope of Use:** Commercial kitchens, cafes, restaurants and bakeries

**Solids Interceptor** – a stand-alone tank that comes pre-assembled with a Solids Basket Accessory and is designed to be installed upstream of a grease interceptor to capture solids and general debris. **Scope of Use:** Commercial Kitchens, Restaurants, Cafés, Bakeries, and Food processing plants

**Solids Basket Accessory** – can be fitted directly into an Endura Grease Converter, in place of the inlet baffle, to provide a Solids and Grease interception solution where space is restricted. **Scope of Use:** Commercial Kitchens, Restaurants, Cafés, Bakeries, and Food processing plants.

**Sediment Trap** – designed separates fine sediments, such as coffee grinds, plaster and general debris, from wastewater before it reaches the plumbing and sewer systems. **Scope of Use:** Coffee shops, Bakeries, Medical and Dental centres, Art studios - **NB:** not suitable for installation where FOGs may be present in wastewater.

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## Manufacturing Standards

There are no set standards for the manufacture of Grease Converters.

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## On Product Identifiers

### Marley Grease Converter:

**Metal Tag** – showing Manufacturer details and website, Model Number, Serial Number

**Plastic Tag** – showing manufacturer details and model number

### Endura Grease Converter Products:

Manufacturer Details

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## Relevant New Zealand Building Code Clauses

### NZBC G13 Foul Water:

- › G13/AS2 3.4 Grease Traps

### NZBC B2 Durability

- › 15 years for connections where ease of access is moderate but difficult to replace, (e.g., typical drainage system laid adjacent to a building foundation)
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## Design

The Marley Grease Converter is designed so the incoming flow of wastewater moves through a series of rotating baffles which disturb the water flow enough to start the process of separating the FOGs. A series of solid baffles hold the separated FOG's in two chambers, the first chamber is where the Marley Actamatic Liquid is introduced via an auto-dosing pump. Some bacteria can be pulled through to the second chamber, this provides a secondary space for FOGs that have passed through to be attacked before effluent exits the tank entering the sewer system.

Correct sizing of the unit to the installation is critical to ensure effectiveness, further information can be found in the Marley Grease Converter Technical Manual.

Marley Actamatic Liquid is the only approved product to be used with the Marley Grease Converter and Endura Grease Converter systems.

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## Installation

**The Marley Grease Converter and Endura Grease Converters** – can be installed in most commercial or industrial premises where food is prepared or processed for the treatment of FOG's. As fully sealed units these Grease Converters can be installed inside the premises without risk of leakage and/or odour problems.

- › Marley Grease Converter and Endura Grease Converters must be installed by a licensed and registered plumber and must comply with the New Zealand Building Code. Installations will require approval from the local authority
- › Inlet and outlet piping must not be less than 50mm, the pipe size and gradient must be in accordance with the NZBC Clause G13
- › When connecting to an existing discharge pipe, ensure it has been cleaned of any sludge/waste build up and/or obstructions
- › Installations under a bench must allow a minimum of 300mm clearance above the lid to allow proper access for cleaning and maintenance
- › Ensure the Grease Converter is installed in a part of the building where external access is available for cleaning and pumping equipment
- › Do not connect dishwashers to the Grease Converter as high temperatures and harsh cleaning chemicals will adversely affect the performance of the micro-organisms and ultimately the performance of the Grease Converter
- › Ensure there is a dedicated sink not connected to the Grease Converter for the disposal of floor and oven cleaning fluids. Harsh chemicals will adversely affect the micro-organisms and ultimately the performance of the Grease Converter. Ensure the hot water temperature emptying or flowing from fixtures into the Grease Converter does not exceed 50°C

- › An automatic pump dispenser must be installed when using a Grease Converter
- › Ensure the distance between the last fixture and the Grease Converter is not greater than 8 metres. This will avoid the solidification of the FOG's in the connecting pipes before it reaches the Grease Converter. If the distance from the last fixture to the Grease Converter is greater than 8 metres heat trace lines and/or lagging must be used to maintain temperature and prevent the FOG's from solidifying
- › Waste disposal units should not discharge into a Grease Converter as solids will build up quickly and affect the performance of the Grease Converter
- › In-sink screens or dry basket arrestors should be fitted to limit the entry of food scraps into the system. Grease Converters are designed to treat sink wash water containing FOG's and not kitchen scraps or raw meat
- › Tighten the lid hinges of the Marley Grease Converter and ensure that the inlet and outlet connections are properly sealed to maintain an air/watertight installation
- › An inspection/sampling point must be installed on the outlet as close as practicable to the Grease Converter
- › For improved performance, an air vent to the outside of the building should be installed. Place the air vent before the inlet of the Grease Converter.

**Endura Solids Interceptor** – available as a standalone unit or as an accessory that can be installed directly into an Endura Grease Converter.

- › As a stand alone unit acting as a prefilter there must be a minimum of 460mm above the unit to allow for the removal of the Solids Basket for cleaning and maintenance
- › The tank is marked with 'IN' and 'OUT' above the respective connections, using a flexible coupling is recommended
- › The interceptor should be installed as close as possible to the fixture(s) being served to reduce the risk of solids/grease accumulation in extended runs of pipe
- › Piping should be installed at a slope of 20mm per 300mm of length or greater to maintain effective discharge
- › When a Solids Basket Accessory is installed into an Endura Grease Converter, the 460mm clearance requirement overrides the 300mm clearance normally accepted for the Endura Grease Converter to allow the filter cartridge to be removed
  - When installing into an Endura Grease Converter the Solids Basket accessory is designed to replace the inlet baffle of the Endura Grease Converter
  - The Solids Interceptor has two filters coarse and fine, the coarse filter must always be installed closest to the inlet of the Grease Converter

**Endura Sediment Trap** – a standalone unit designed to separate fine sediment, such as coffee grinds, plaster and general debris, from wastewater before it reaches the trade waste lines.

- › A 300mm clearance above the tank is advised to allow ease of access for servicing and maintenance
- › Inlet and Outlet connections should have a 50mm diameter and be connected with a flexible coupling
- › The cover has a load rating of 200kg and is suitable for both in-floor and on-floor installations
- › A maximum continuous operating temperature of 104°C should not be exceeded
- › The Endura Sediment Trap has a maximum flow rate limit of 75.5 litres/minute
- › Do not decrease the pipe diameter across the unit, (i.e., inlet vs. outlet)

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## Maintenance

### SAFETY NOTE:

When opening the lids of a Grease Converter for servicing it is important to ensure the area is secured to prevent any persons from accidentally falling into the unit.

Always remember to lock down the lids after cleaning has been completed and dispose of the collected effluent as per local council regulations.

A full maintenance regime is essential to ensure the correct running of a Grease Converter, Marley recommended using Ecoworld NZ 2018 Ltd. who are the national service agents for Grease Converters and have over 20 years' experience with Marley Grease Converter and Endura Grease Converters.

- › Prior to maintenance and removal of the lids ensure all flow sources are isolated and the pump/dispenser is isolated electrically
- › Unclip the lid and carefully remove checking that the lid seal separates from the body of the Grease Converter without catching or damaging the seal, place lid in a safe position
- › Using a suction pipe empty all chambers of the Grease Converter of water as well as all liquid and semi-liquid FOG's. Use a flat bladed spatula or similar device to wipe off any FOGs attached to the walls or internal components of the Grease Converter
- › Solid material in the main chambers too large to be removed by suction should be removed by hand. NOTE: advise the site manager if this is the case as it may indicate incorrect use of the appliances connected to the Grease Converter

- › Partially refill the Grease Converter to wash down the walls and internal components and suction out
- › Wash down the lid of the Grease Converter and check the condition of the lid seal for damage
- › Refill the Grease Converter by opening the connected appliances and allow to run for a minimum of ten minutes after the water level has reached the invert of both the inlet and outlet connections to check that no blockages have occurred as a result of the clean out
- › Relace the lid and lock down by closing the clips
- › Activate the automatic dispenser pump and ensure the bottle of Marley Actamatic liquid has sufficient liquid, replace if required
- › Once the pump out has been completed a shock dose of 100ml Actamatic Liquid should be poured down the nearest appliance connected to the Grease Converter and run a water supply to wash the Actamatic liquid down into the Grease Converter, this shock dose will kick off the bacterial culture required for the bio-remediation process. Alternatively, the shock dose can be applied directly to the Grease converter but must be applied to the chamber where the inlet supply is connected

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## Importer/Distributor

### Marley New Zealand Limited

- › 32 Mahia Road, Manurewa, Auckland 2102, New Zealand
- › 0800 627 539
- › [info@marley.co.nz](mailto:info@marley.co.nz)
- › [www.marley.co.nz](http://www.marley.co.nz)
- › NZBN: 9429038863431

### Manufacturer – Marley Grease Converter

- › **Stirling Metalworkers**
- › 5a Riaha Street, Elsdon 5022, Wellington, New Zealand
- › [info@stirlingmetalworkers.co.nz](mailto:info@stirlingmetalworkers.co.nz)
- › [www.stirlingmetalworkers.co.nz](http://www.stirlingmetalworkers.co.nz)

### Manufacturer – Endura Grease Converter / Solids Interceptor / Sediment Trap

- › **Canplas Industries Limited**
- › 500 Veterans Drive, Barrie, Ontario, Canada L4M 4V3
- › 1-0800-461-1771
- › [canplas@canplas.com](mailto:canplas@canplas.com)
- › [www.canplas.com](http://www.canplas.com)

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## Limitations on Use

Grease Converters are designed to capture and treat FOG's where food is prepared or processed and uses a bio remedial process where known micro-organisms breakdown the FOG's into an easily digestible form. The Marley Grease Converter uses Actamatic liquid which is pumped into the Grease Converter at a set rate. Using enzyme based or other cleaning fluids will not achieve the same result as the Actamatic fluid and are not recommended.

It is important to ensure that kitchen staff are correctly trained to ensure that the minimal amount of solids pass into the Grease Converter as continuous medium to large volumes of solids entering the system will unduly affect the pH and BOD levels within the Grease Converter and will cause unnecessary clean outs and possible fines from councils for non-compliant Tradewaste.

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## Warnings and/or Bans

There are a number of local councils in various parts of the country that do not accept Grease Converter installations as an alternative solution to the requirements of NZBC Clause G13.

Always check the acceptability of Grease Converters as part of the Tradewaste solution with your local authorities to ensure compliance with the council rules and regulations.