GREASE BOSS

OPERATIONAL MANUAL

MACTRAP GREASE BOSS G25 MODEL - 216
AUTOMATIC GREASE REMOVAL UNIT (GRU)

VERSION 2018

Grease Boss image shows a left to right flow option. The Grease Boss can also be plumbed right to left.

CONTACT

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www.mactrap.co.nz
Manufactured by MACTRAP Katikati New Zealand

GREASE BOSS G25 GREASE REMOVAL UNIT

HOW GREASE REMOVAL UNITS WORK

The Grease Boss can be installed internally and requires minimal maintenance inside the machine. Waste fats, oil and grease (FOG) can be collected in a disposable container (such as a plastic milk bottle) and put with other rubbish collection, or into a washable collection container.

The Grease Boss is easy to clean internally and requires no chemicals and little on-going maintenance.

The Mactrap Grease Boss can be plumbed for either right or left hand inlet flow.

Waste water enters the unit through a removable filter basket which captures food solids. This basket can be removed from the front of the machine allowing minimum head room when installing.

In the trap, FOG rises to the surface where it is attracted by a rotating double-sided collection tube. This FOG is removed via wiper blades into an external collection container. (Tests show that over 98% of FOG is removed). A PLC controlled heater ensures that grease is kept at a temperature that will not solidify. If no fat is used the control does not switch the heater on as oils can normally be collected cold.

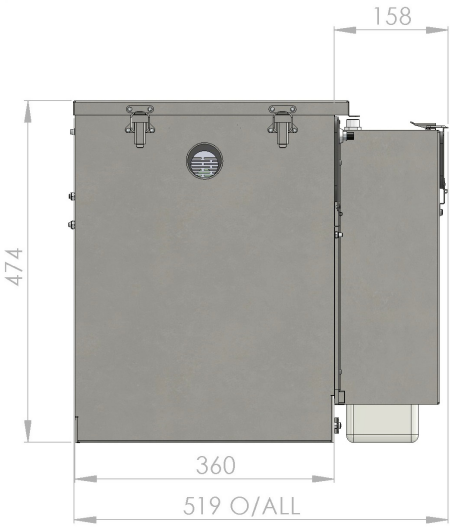
Water with the FOG removed exits from the unit into the waste water system.

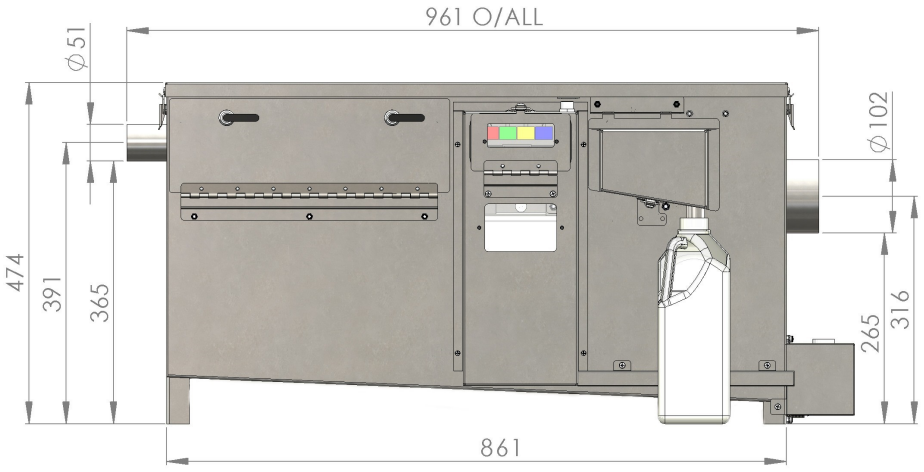
WHERE CAN GREASE BOSS BE USED

- Where there is no room for an external passive trap or as an alternative.
- Where under bench height space is tight as basket is front loading.
- Where there are self-cleaning ovens*
- Where there is a dishwasher*

*conditions applicable

DIMENSIONS





SPECIFICATIONS

Material	304 Stainless Steel
Max Inflow Rate	2.5 / sec (see weir instruction pg 6)
Treatment Capacity	< 500 L passive capacity
Timer / Controller	230v, 50 Hz, Crouzet PLC 24-Hour Operation
Heating Element	Standard Smiths 2kw SIN 2
FOG Removal Rate	<36kg/hr
Static Capacity	100 Litres
Motor	230V 5RPM

Maximum Operating Temperature 65° C

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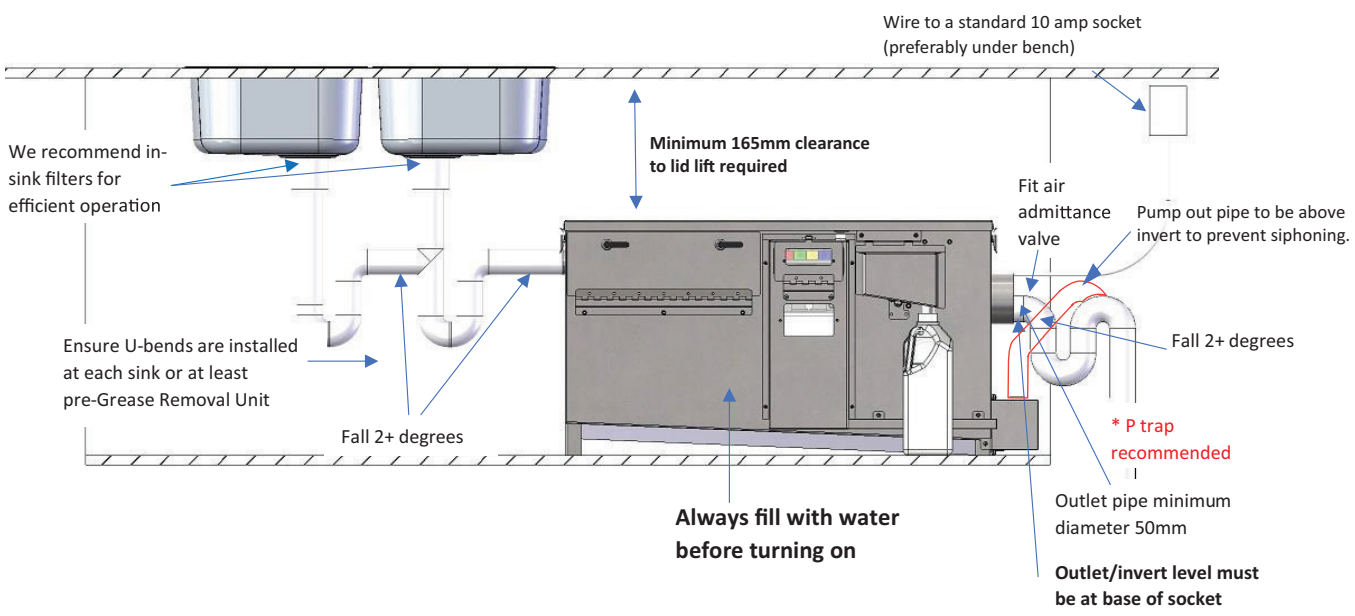
CORRECT INSTALLATION



Grease Boss can be installed wherever a 165mm clearance can be obtained

*IMPORTANT: THE GREASE BOSS IS NOT A SEALED UNIT. MAKE SURE A P-TRAP OR SIMILAR IS USED AFTER OUTLET TO ENSURE NO ODOUR BACK FLOW FROM SEWER.

ENSURE CORRECT OUTLET PIPE SIZE TO SUIT HYDRAULIC FLOW ENTERING THE UNIT

- Use flexible couplings to inlet and outlet.
- Ensure 1:40 fall at all times. (2+ degrees)
- Do not use compression hose.
- Ensure unit filled with water prior to switching on power source.
- It is advisable to leave power on to retain integrity of default settings.
- Check correct invert and weir levels.
- Pump outlet pipe must be above outlet invert to prevent siphoning.

NOTE: Before switching on for the first time, lightly coat wiper blades with vegetable oil (not petroleum based oil) to prevent sticking to roller.

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GETTING STARTED

WARNING: UNIT IS 240 V - TURN POWER SUPPLY OFF BEFORE REMOVING WIPER OR ROLLER UNITS AND IF OPENING THE ELECTRICAL COVER.

STEP 1 Check the unit is plumbed in correctly (and that all parts can be accessed)

STEP 2 Fill unit with water until flowing freely out outlet

STEP 3 Connect to electric supply (via a standard 10 amp switch)

STEP 4 Switch power on at mains (the blinking red light will indicate that power is on). The unit will be programmed so there is no need to set the timer and cycle programmes. The red light should be blinking. This means the unit is working.

STEP 5 Carry out all housekeeping requirements outlined in this manual.

ATTENTION

- **NEVER TURN ON WHEN EMPTY**. The heating element may overheat.
- Unit requires daily housekeeping by removing FOG via filter for solids.
- Do not let fat or solids build up on heating element.
- Service contracts by approved engineer are available and recommended.
- Unit will lose efficiency if not maintained as solids will build up inside.
- The Grease Boss is designed to trap and remove free floating grease oils and fats.
- The solids basket provided assists protecting the unit from solid food waste build up. To help ensure the highest efficiency, reduce solid food waste by installing primary sink strainers or by scraping waste into bins.
- Consult your supplier in the event of increased inflow rates to the Grease Boss.
- Do not use harmful detergents to clean Grease Boss.

Due to the many possible factors affecting hardness of water used by customers and regional differences of water hardness, Mactrap and their supplier of the heating element cannot guarantee the lifetime of any element and elements are therefore not included in our warranty statement.

UNIT EFFICIENCY

The passing of dishwasher waste and self-cleaning oven waste through the Grease Boss may affect the efficiency of the oleophyllic attraction of fats and oils in the Grease Boss. High use of certain emulsified oils and homogenised dairy milks may also affect efficiency.

This type of FOG waste may not be collected as effectively as free flowing fats and oils which can result in effluent readings carried out by some testing laboratories showing higher Mg/litre fats and oils readings than specified. This problem occurs with all grease trap systems including passive traps. We recommend customers carefully check the allowable fats and oil effluent permitted in their specific local authority consent. Customers should include simple management processes to reduce the amount of emulsified oils and milk products entering the grease removal system to a minimum.

WARRANTY

A 12 month warranty applies to parts and materials for this MACTRAP GRU. This warranty does not include any labour, cleaning out or maintenance. If the MACTRAP GRU is not installed and operated as per these operation guidelines, the warranty will be void.

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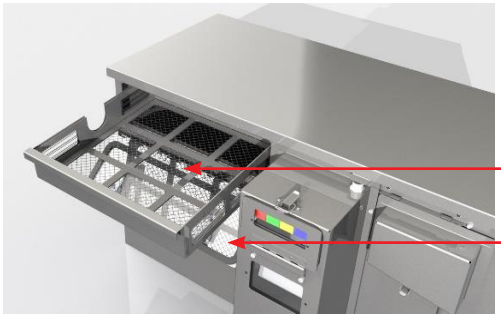
DAILY MAINTENANCE

WARNING: UNIT IS 240 V - TURN POWER SUPPLY OFF BEFORE REMOVING WIPER OR ROLLER UNITS AND IF OPENING THE ELECTRICAL COVER.

To avoid blockages and odour in the MACTRAP Grease Boss and filter basket - follow these daily maintenance steps. View our maintenance video on our website under www.mactrap.co.nz/installation-and-maintenance/grease-boss-installation/

FILTER BASKET AND SLUDGE DRAIN

DAILY



Open the filter door. Remove filter basket and empty solids to waste disposal. Clean the basket, replace in in position.

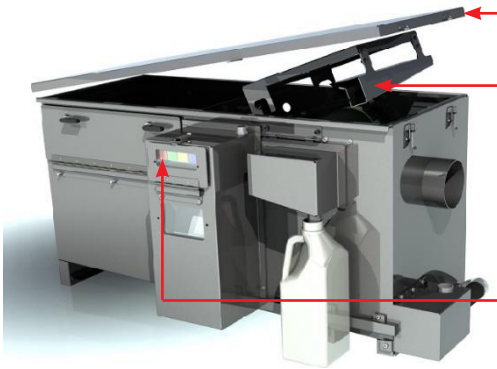
Secure the door.

DAILY

Remove waste fat, oil and grease collection container (old milk bottles are ideal to use) and put in refuse.

Place new container in position.

WEEKLY



Lift the lid and check the blade for built-up fat and grease.

Carefully wipe excess build-up of fat, oil and grease off wiper and replace in unit. Do not clean roller with detergent as this will affect the operation of the grease trap.

IMPORTANT: When replacing the lid make sure the tab on the lid is over the sensor. The machine will not work if the tab and sensor are not touching. **After replacing the lid, press the red button once to reset the machine.**

Once reset, the light will change from continuous red to blinking red. The blinking light means the machine is working.

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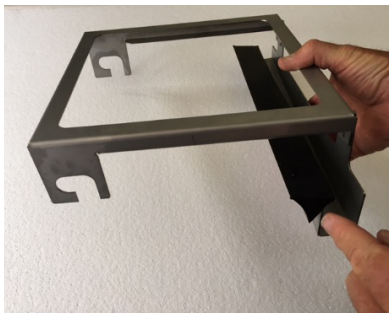
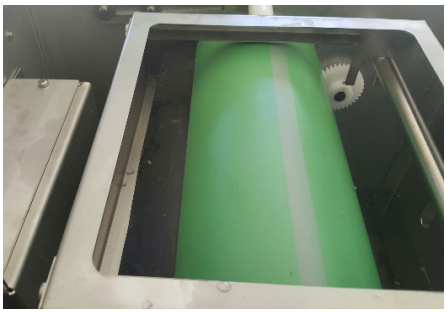
OUTER WIPER / FRAME





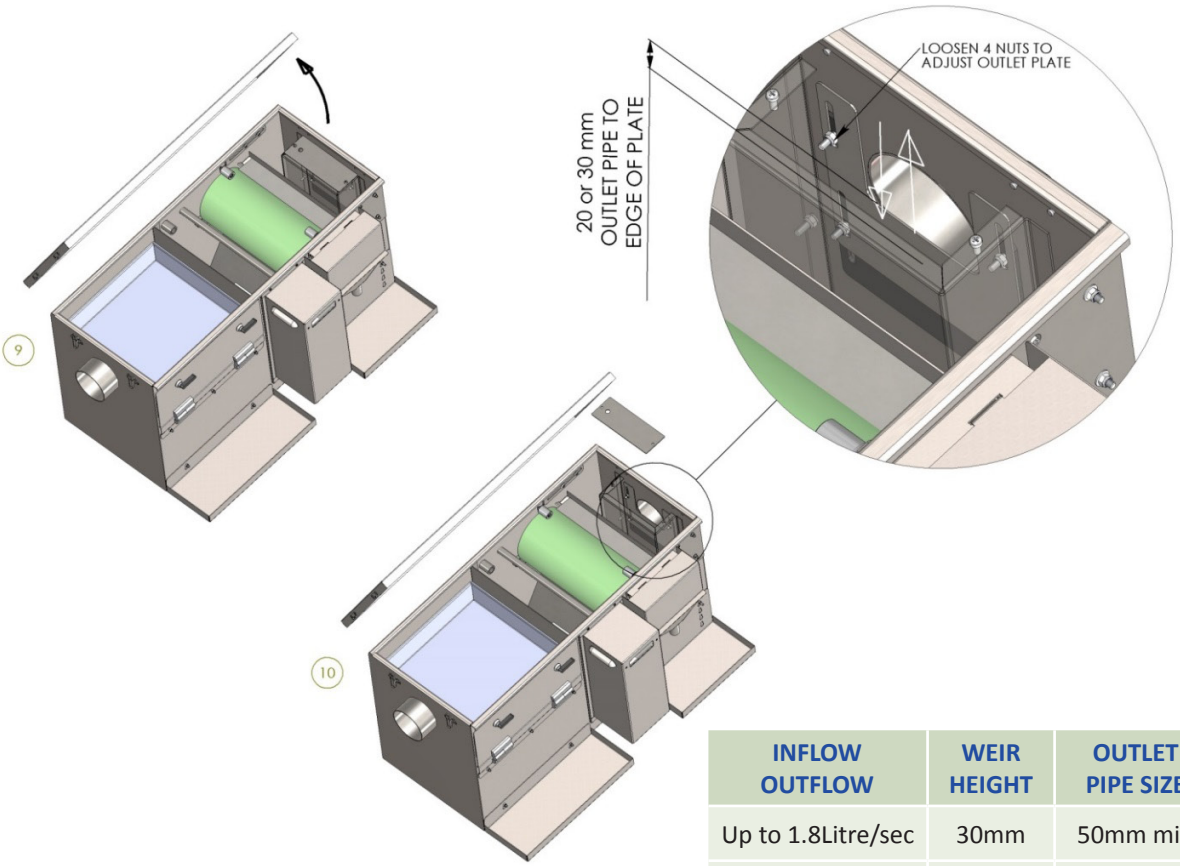
To remove outer wiper / frame, hook the frame off the transverse conduit tube, wipe and replace. Clean the wipers daily if the unit has high useage.

INNER WIPER

This should be removed and cleaned as part of your periodic servicing.

- Keeping solids especially coffee grinds, onion peel, bones, utensils and plastics out is important to ensure efficient operation of the extraction process.
- If operating with large amounts of cream or homogenised milk, build up will slowly occur, so drain tank occasionally with tap and wash units inside walls.
- To assist and limit problems of internal solids build up, practice wiping as much dairy waste to rubbish prior to pre wash rinsing.
- As well as the MACTRAP filter we recommend permanent sink solids filters be used as well.

ADJUSTING THE OUTLET WEIR TO SUIT INLET FLOW RATE



INFLOW OUTFLOW	WEIR HEIGHT	OUTLET PIPE SIZE	INLET INVERT	OUTLET INVERT
Up to 1.8Litre/sec	30mm	50mm min	315mm	265mm
1.81 to 2.5/sec	20mm	100mm min	315mm	245mm

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OPERATING THE MACTRAP GREASE BOSS PUMP

The pump out option on the Mactrap Grease Boss enables users to occasionally empty and flush out the unit. (You may want to do this to eliminate odour or sludge build up). It may also reduce the frequency of external pump outs. The usual daily maintenance on the grease trap is still required.

THE PUMP ONLY WORKS IN THE EARLY MORNING

The pump out programme will not activate until the oil extraction cycle has been completed. As this usually takes place between 2am and 4am the prime time for pump out is 5 hours after this cycle is complete. This means the pump will only work until 9am. Activating the pump out should be done early in the morning. The tank design restricts residule FOG from exiting. This can be removed manually if required at the end of the pump out.

AFTER EMPTYING THE TANK YOU MUST REFILL WITH WATER IMMEDIATELY

You can do this by filling the sink that empties into the grease trap and allowing this to run into the tank. If the tank is not refilled with water, the heater element will burn out.

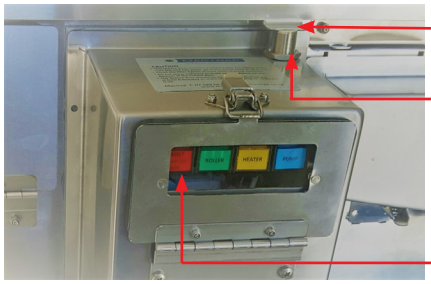
To activate the pump, open the control panel door

Press the blue button marked 'PUMP'*
* Will not function outside set parameters.

RESETTING THE UNIT

If you have lifted the lid to clean the unit or for any other reason, when you replace it, the sensor tab needs to be positioned over the sensor unit.

If the red light is not blinking, press the red 'Power on' button once. After a few seconds it should start blinking.
If the red light stays on (unblinking) there is a fault and you should contact your service agent.



Sensor Tab

Sensor

Red Light - Light blinking = OK

FURTHER INFORMATION

For more information see our maintenance video on our website:
www.mactrap.co.nz/installation-and-maintenance/grease-boss-installation/

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TROUBLE SHOOTING

PROBLEM	CAUSE AND SOLUTION
Not extracting oil Red light is on (continuously without blinking)	**IS THE POWER ON?** Check to be sure the power is on and the time control is set correctly. Check mains connection. If power is being supplied and there is still no display check fuses or contact your supplier. **Check the magnetic switch and wiper are in position. If the lid has been removed for any reason, press the red button to reset the machine. The light will change from continuous to blinking mode.**
	ARE REMOVABLE PARTS CLEANED? Remove the lid and clean away any build-up that may be present in the wiper blades, collection chute or outlet tray. Ensure that the wiper blades are located properly in place with the wiper blades contacting the roller. Replace wiper blades when worn. **Warning: Unit is 240 v - turn power supply off before removing wiper or roller units**
	CHECK THE SKIMMING AND HEATING CYCLES ARE WORKING The Grease Boss heating and extraction cycles should be set to remove grease that is trapped. Make sure the cycles have been correctly set as per instructions. The default time is 2am - 4am (NZ time). **HEATER CYCLE** The tank should heat (15 mins approx.) prior to default start time. If the tank does not heat, the heater may need inspecting. Contact your local service engineer to check. If water temp reraches <42°C during the day the unit will turn on/off regularly in 5 minute intervals. **ROLLER** After heating up, (15 or 30 minutes) make sure that the noise of the roller turning is heard. If the motor can be heard but the wheels are not turning then check the axles and drive couplings that link the motor to the roller. If the roller motor does not display “ON”, the motor must be checked by MACTRAP for possible replacement.
	MAKE SURE WIPER BLADE ASSEMBLY IS SECURE Position wiper blade assembly over the oil chute guide and secure to locator plate. Check the wiper blade’s condition as some acids and cleaning liquids may cause deterioration over time and therefor a new blade may be required.
	CHECK THE THERMOSTAT IS FUNCTIONING Check that the heating starts as per default. If not a qualified engineer /electrician should check that the thermostat is set at 55°C. Maximum with shut down at 85°C. If water influent is too hot (>65°C) collection efficiency will be affected.

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TROUBLE SHOOTING

PROBLEM	CAUSE AND SOLUTION
Excessive water is observed in the grease collection container	**CYCLE SETTINGS** Check the timer cycle settings are not set for too long a period. The unit should not run extensively after the grease and oils have been extracted. (2 hours max operation)
	CHECK WATER FLOW Make sure that the water flow to the unit does not exceed the rated flow and that there are no drain line blockages downstream from the unit.
	LOW LEVEL OF OIL WASTE If only a relatively small amount of oil is present in the wastewater, the amount of water that is collected in the oil bin can be more than that of the oil. Adjust the cycle timing so as to reduce the cycle duration. **Check blades are in contact with roller.**
Water overflows from the unit	**HAS THE STRAINER BASKET BEEN MAINTAINED?** If water overflows from the inlet chamber the basket may need emptying. Remove, clean and re-install.
	DOES THE INLET GASKET NEED REPLACING? General overflowing can also result from a worn inlet gasket or a blocked outlet pipe. Replace gasket and clean all possible blockages downstream of the unit.
	HAS SEDIMENT BEEN ALLOWED TO BUILD UP OVER TIME? Over time, sludge could build up at the bottom of the unit and block the path of the flow underneath the outlet baffle. Clean as per maintenance instructions. Build up may severely reduce efficiency of unit and lead to overflow.
Odour Reported	**HAS MAINTENANCE BEEN CARRIED OUT?** Ensure all recommended maintenance is carried out. Check backflow prevention from sewer line and vent the outlet. Check for scum adhesion especially sour milk froth around the liquid surface level, skim off occasionally or use sink shower to rinse inside with warm water. **Check the P traps are installed as shown on Page 3** **Flush occasionally with clean hot water.**
Excessive steam comes out of the unit	**SIPHONING** This results in a reduced level in the unit caused by the effect of “siphoning”. This occurs in particular installations where the downstream piping of the unit is not properly installed. If this occurs, turn off the unit immediately and consult the plumber or the distributor for more advice. **Check the water level. Do not run dry or empty without refilling with water.**

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