

Trade Waste

Grease Trap Sizing and Installation Guide

Peak Hourly Flow

Grease arrestors servicing Whitsunday Regional Council's sewerage system must be sized in accordance with *Appendix 5 of the Trade Waste Environmental Management Plan (TWEMP) 2019 – Peak Hourly Flow Rate for Grease Arrestor Sizing*. The figures in Table 1 below are Council's adopted method for sizing grease arrestors.

Sizing a passive grease arrestor from fixtures

Step 1: Determine the number and type of each trade waste fixture connected to sewer via the grease arrestor

Note: where the fixture is not listed, the volume will be determined on application

Step 2: Determine the peak hourly flow allowance for each fixture using Table 1 and add these together to calculate the total peak hourly flow for the premises.

Step 3: Determine the grease arrestor size, applying the following TWEMP requirements (Section 12.2.1 and Appendices 5 and 6):

1. The minimum capacity of an individual grease arrestor is 1,000 litres (unless approved otherwise by Council).
2. The maximum capacity of an individual grease arrestor is 5,000 litres. Where the required capacity exceeds 5,000 litres, multiple discrete arrestors must be used, each separately treating a defined waste stream.
3. Combi ovens in continual daily use (e.g. Commercial Kitchens, supermarkets, fast food chains) require a minimum 3,000 litre grease arrestor (Appendix 5).
4. Major fast food franchise outlets (e.g. chain takeaway restaurants) require standard grease arrestor sizing, with a minimum capacity of 3,000 litres (Appendices 5 and 6).

Table 1: Determining volume from fixtures.

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Fixture & Fittings	Peak Flow (Litres/hour)
Bain Marie – Water heated	Use maximum capacity of apparatus x 3
Bin Wash / Wet Garbage	500
Cleaners Sink	140
Combi Oven (small to medium kitchens)	300 – 600 (assessment required)
Combi Oven (continual daily use, i.e. supermarkets, fast food chains)	3,000 L grease arrestor minimum size
Dishwasher – Large (>1 outlet)	Manufacturer's peak hourly flow rate x 3
Dishwasher – Medium (Upright)	300
Dishwasher – Small (Under Bench)	150
Display Cabinet	30
Floor Waste	50
Grated Strip Drain	50 litres per metre
Greasy Canopy (water cleaned)	50
Hand Basin	30
Noodle Cooker	100
Potato Peeler – Large	Manufacturer's peak hourly flow rate x 3
Potato Peeler – Medium (Upright)	200
Potato Peeler – Small (Bench Type)	100
Prover	400
Rotisserie Rack	100
Salamander	50
Sink – Utility/Pot, per outlet connected separately to drain (Depth >300mm)	300
Sink – Single Bowl (Depth <300mm)	150
Sink – Double Bowl (Depth <300mm) – fixture pair	300
Trough	35
Tundish (other than refrigerant condensate)	10 plus any other listed connected apparatus
Wok Burner – dry	30 per arm
Wok Burner – wet	Manufacturer's peak hourly flow rate x 3

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Takeaway restaurants e.g., Fast Food Chain Franchises – Minimum 3,000 litres. Contact Council's Trade Waste Officer for clarification before installation of any fixtures.

Specifications of Arrestors

Where an Arrestor is required to pre-treat waste before its discharge to the Sewerage System the Arrestor shall be of a Council approved design and capacity.

All arrestors installed shall comply with the following:

- (a) be not less than 1,000 litres in capacity (unless approved otherwise by Council);
- (b) be vented with a 100mm induct vent and a 100mm educt vent;
- (c) have gas tight lids;
- (d) be fitted with a sample point downstream of the arrestor with 100 mm diameter access covers, provided as a disconnecter trap with a capped riser immediately downstream of the arrestor, within the premises, at finished ground level (TWEMP s9.1); note, on Halgan type grease arresters the designated sample point (gully trap) must be installed downstream of the configuration installation detailed by Halgan;



- (e) be provided with a hose tap fitted with a backflow prevention device (RPZD) within 5 metres of the Arrestor for cleaning purposes;
- (f) have a capacity below the invert of the outlet of the Arrestor at least twice the total capacity of the appliances and fixtures connected to the Arrestor or, a larger capacity if required by the Council;
- (g) have a distance from the top of the Arrestor to the outlet that is at least half the depth of the Arrestor below the outlet invert;
- (h) have the outlet invert level of the Arrestor at least 50 mm below the inlet invert level;
- (i)

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- (j) Grease arresters must be banded if installed above ground and in a location where an environmental risk could occur if the vessel leaks. The banded area must be able to hold 110% capacity of effective volume of the arrester in the event of accidental leakage.
- (k) all floor waste gullies and sink wastes prior to the pre-treatment device must be fitted with dry basket arrestors with a fixed secondary strainer (in-floor for floor wastes, in-sink for sinks) (TWEMP Appendix 6).
- (l) All concrete grease or silt Arrestors are to be protected by an internal acid resistant protective coating that is installed during the manufacture of the Arrestor and prior to the delivery and installation of the Arrestor, and comprised of a spray-on protective coating, an epoxy protective coating, or a liner made from a durable material.
- (m) Where it is intended that several trade waste generators share the use of a grease arrester, the following information is required to be clearly tabled on the plan submitted with the application for approval: the size of the arrester; details of the loading to be discharged by each trade waste generator; the names of the businesses and shop number(s) sharing the arrester.
- (n) Grease arrestors must be located so as to allow appropriate access for inspection and servicing requirements. Council must approve the location prior to installation.
- (o) Where a grease arrester is unable to be located in an accessible area for servicing, a suitable pump out line must be installed.
- (p) Grease arrestors that need to be installed internally must be located in a suitably sealed, vermin proofed room with mechanical ventilation. The room must have external access only and be completely sealed from food preparation areas. A hose cock and remote servicing pipe must be located within the room. The door of the room must remain closed when the grease arrester is being serviced.
- (q) Remote servicing pipes for pre-treatment equipment must be installed, minimum 80mm diameter. The pipe inlet at the device end must be positioned above the device and be complete with a cam lock fitting. The suction end of the pipe should be easily accessible by the waste transport contractor and fitted with a male cam lock fitting.
- (r) Grease arrestors installed in restricted areas must satisfy the following requirements: the minimum clear height above the top of the arrester lids and the underside of the floor slab, or concrete thickening beam or any other obstruction should be 1500mm minimum for gastight screw on light duty lids and 1800mm minimum for gastight covers and frame. A safe working platform may be required adjacent to the arrester to enable the gastight covers to be removed from the frame. The walkway floor of the platform should be a minimum of 2100mm clear of the underside of the floor slab, or concrete thickening beam or any other obstruction.
- (s) Grease arresters located in basements or confined spaces under a building must have remote servicing pipes for pre-treatment equipment. The pipe inlet at the device end must be positioned above the device and be complete with a cam lock fitting. The suction end of the pipe should be easily accessible by the waste transport contractor and fitted with a male cam lock fitting.

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Notes

- Garbage disposal units are not to be installed.
- Where Whitsunday Regional Council has approved businesses to share a grease arrestor, the minimum size of the grease arrestor shall be calculated based on the capacity of the total fixtures for all businesses to be connected to the arrestor.
- Pump out frequency must be followed as per standard approval conditions.
- Maximum size grease arrestor size allowed is 5,000 litres. Where multiple grease arrestors are to be installed, each grease arrestor shall be a separate discrete flow to sewer.