Polyethylene Tanks

Halgan Pty Ltd

Installation Requirements Modular Grease Trap (MGT) Water Corporation

1 Design & Approvals

1.1 Permits and Approvals

The Polyethylene vessel shall be installed in compliance with local Regulations, Commercial & Industrial Services group requirements, the Health Regulations and all relevant codes of practice.

Before installation of the TRAP is commenced:

1. A duly completed Industrial Waste Installation Form must be lodged with Water Corporation. The model and configuration of the proposed TRAP units must be stated on the form.
2. A Trade Waste Permit must be obtained from the Water Corporation Commercial & Industrial Services Section. Approval of the WA Health Protection Service must be obtained if the TRAP is to be installed internally of a building.
3. It will be a condition of Water Corporation trade waste permit approval that the servicing and maintenance of the TRAP unit meet or exceed the requirements specified in this manual.

2.0 Detailed Design & Installation Requirements

2.1 General

2.1.1 Location

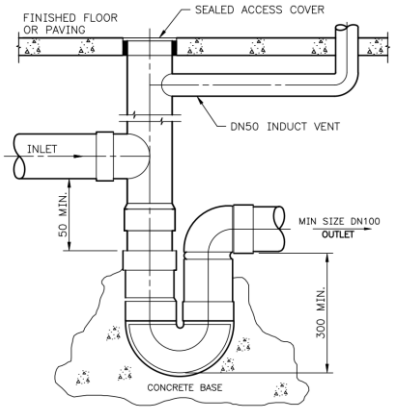
The Polyethylene vessel is to be installed in a location that will not cause a nuisance, will not obstruct fire access, and in which it will not be damaged by vehicles or traffic or vandalised and which allows ease of access for maintenance. It is preferred to have the Polyethylene vessel installed externally below ground with a gravity inlet and gravity outlet.

2.1.2 Surcharge Relief Point

The Polyethylene vessel must not be used as a surcharge point. An extra surcharge gully or reflux valve may be required.

2.1.3 TWSP Sampling Points

Sampling points shall be provided at the inlet and outlet of the Polyethylene vessel. If below ground, risers shall be extended to ground level and fitted with a gas tight inspection box. The sampling points can also be used for clean up points. Refer to typical drawings HX33-10-10.



SEALED TRADE WASTE
SAMPLING POINT

2.1.4 Piping Material

Copper pipe and fittings shall not be used in trade waste installation as per AS/NZS 3500.

2.1.6 Non Standard Installations

Certain installations or position of installations that are unusual due to particular circumstances or matters not covered by this specification or local codes may be submitted to Halgan for consideration. Local Authorities approval for these situations will be considered on an individual basis.

2.1.7 Health Requirements

The Polyethylene vessel shall be designed and installed in such a way as not to cause a danger to health arising from leakage, blockage or surcharging.

2.1.8 Fire Resistance Level

The Polyethylene vessel is to be installed to maintain the Fire Resistance Level (F.R.L.) as specified in the Building Code of Australia.

2.1.9 Safety

The carrying out of work covered in this Technical Manual shall comply with the safety requirements of the relevant Authorities.

2.2 Installation Requirements

2.2.1 General

The Polyethylene vessel is to be installed in a location that will not cause a nuisance, obstruct fire access, cannot be vandalised or be damaged by vehicles. The Polyethylene vessel must have ease of access to pumpout point for maintenance. A hose tap fitted with a Back Flow Protection Device (as per AS/NZS 3500) must be provided within 5 m of the *TRAP* for cleaning purposes.

2.2.2 Installation above ground

The Polyethylene vessel is to be supported on a 100 mm thick concrete pad or on 98% compacted level ground with 20 mm sand base. All pipes connecting to the Polyethylene vessel shall be fully supported, there should be no stress on the tank connections. All storm water must be diverted away from Polyethylene vessel to prevent undermining of supports or foundations.

2.2.3 Installation below ground

All connections to the Polyethylene vessel shall be in accordance with the appropriate authorities. Any excavation exceeding 1.5 m in depth shall comply with the construction safety Acts and Regulations. Before backfilling, the Polyethylene Trap must be filled with water.

2.2.3.1 Excavation dimensions

The excavated whole width shall be kept as narrow as practicable. The depth shall be not greater than 150 mm than the required depth. A 75 mm clearance is required at the sides of tank.

2.2.3.2 Over excavation

Where an excavation has been deeper than necessary, the excess depth shall be filled either with bedding material compacted to achieve a compaction of 98% or concrete.

2.2.3.3 Installation in mine subsidence, filled, unstable or water charged areas

A qualified engineer is required to certify this application.

2.2.3.4 Bedding/Backfill material

- MGT550-1500

The bedding material shall be 4:1 sand cement.
The bedding shall be thoroughly compacted by tampering at 300 mm layers.
The bedding material shall encase the whole tank.

2.2.3.5 Final Backfill

The final backfill material shall comply with the following:

(a). Spoil from the excavation of the trench may be used.
(b). Foreign material such as builder's waste, bricks, and concrete shall not be used.
(c) The backfill shall be compacted to restore the excavated hole as near as practicable to the normal ground.

2.2.4 Relief Overflow Point

The Polyethylene vessel is not to be used as a surcharge point. An extra surcharge gully may be required or a reflux valve installed. Refer to figure in AS/NZS 3500 Part 2. The drainage line upstream from the MGT shall have an overflow relief gully as per the AS/NZS 3500.

2.2.5 Protection Barricades

The protection barricades shall be installed to protect the Polyethylene vessel from physical damage. The posts shall be manufactured from 80 mm galvanised tube (refer to material specification) with a sealing cap at the top. A 400 mm white strip shall be painted at the top of the post. The posts will be 1300 mm long and approximately 800 mm apart.
- Concrete Installation - The post shall be 1300 mm long with a 200 mm x 200 mm base plate fixed to the concrete with four 12 mm x 50 mm concrete anchors.
- Installation in Bitumen & In Ground - A hole shall be excavated 400 mm x 400 mm x 400 mm deep. The base shall be encased in concrete. The post will be 1700 mm long and have bituminous paint applied to the section enclosed in concrete. The concrete shall be finished in a way that water cannot settle around the base.

2.2.6 Venting

Refer to AS/NZS 3500 Part 2.

2.2.7 Vacuum Pumpout Line (optional extra)

Note: Consult with pump out contractor and Customer Service Representative for correct location.

The vacuum pump out line is used by the cleaning contractor to pump out the TRAP in restricted site applications. A 50 mm M.I. quick release coupling with dust caps is supplied with the unit. The vacuum line has to be extended to the external of the building for ease of access. The lines must be as straight and short as possible. Where bends are necessary, only long radius bends should be used. The size of the vacuum line pipe can be 50 mm for the first 6 metres and 80 mm thereafter. The piping and fittings material can either be class 12 pressure pipe or galvanised pipe (refer to material specification). A 600 mm long x 600 mm wide x 200 mm deep access area is required around the quick release coupling for ease of connection. Vacuum lines not permitted to be hard plumbed. Must be installed as per WC guidelines.

2.2.8 Access Lids (refer to Engineers drawing appendix 1)

General - The Polyethylene vessel with the polypropylene lid can be installed in a non trafficable areas, eg above ground.

Duty of Access Lids -

All covers are manufactured to Australian Standards 3996 and comply with the required design loading.

For above ground or non-pedestrian application the access lid is 600 mm in diameter and manufactured from high density polyethylene lid.

All other application the access lid shall be 600 x 600 square, cast iron, gas tight, concrete infill lid and frame.

All handles are as per Sydney Water requirements 1999.

2.2.9 Installation of Cast Iron Access Covers.

Introduction

In the IN-SITU method, the cover set is supported by the formwork or the Polyethylene vessel Access Lid until the in-situ concrete is strong enough to withstand construction loads. ***The in-situ concrete must support the full width of the frame.***

Halgan covers are individually fitted to ensure a gas-tight fit. Covers and frames are not intended to be rated at not less than 28 Mpa for the supporting walls and for cover infilling.

Preparation

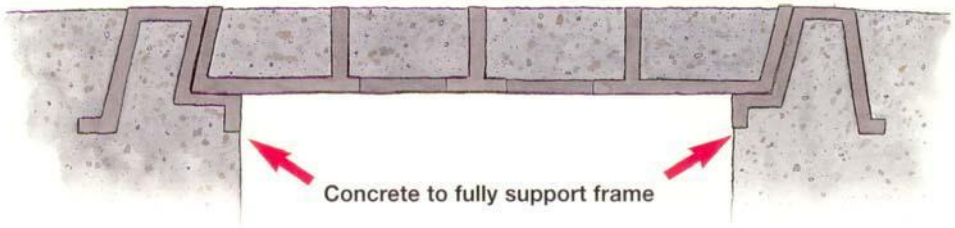
Ensure that the usage class is suitable for the traffic application – refer to AS3996.

Before fixing the cover into position on the formwork, clean and grease all mating surfaces of the cover set and check that the product is correctly assembled.

If the cover is bolted or rivetted to the frame, the cover may be supported directly by the formwork, otherwise, nails can be driven into the formwork so that the frame is supported at the correct level.

Before concreting commences, check that the cover is fully seated in the frames.

If the cover was fitted by installation bolts, these will have to be removed prior to the infilling covers. This means that infilling will have to be delayed until the concrete supporting the frame has cured.



Concreting

Place the concrete in-situ and vibrate well so that the concrete which supports the full width of the frame and fills the frame cells is well compacted and will reach the specified Mpa. Honeycombed or bony concrete under the frame will reduce the capacity of the cover and may cause it to fail at relatively low loads. If infill covers are supplied the concrete infilling is at the same time.

Screed off the excess concrete and finish the surface as required. The ribs and edges of the cover and frame should be visible.

Allow the concrete to cure before removing the cover and the formwork – premature stripping may damage the supporting concrete and distort the frame.

After the concrete has cured, remove the cover, mark the pit number on the underside of the cover (do not mix the covers) and strip the formwork.

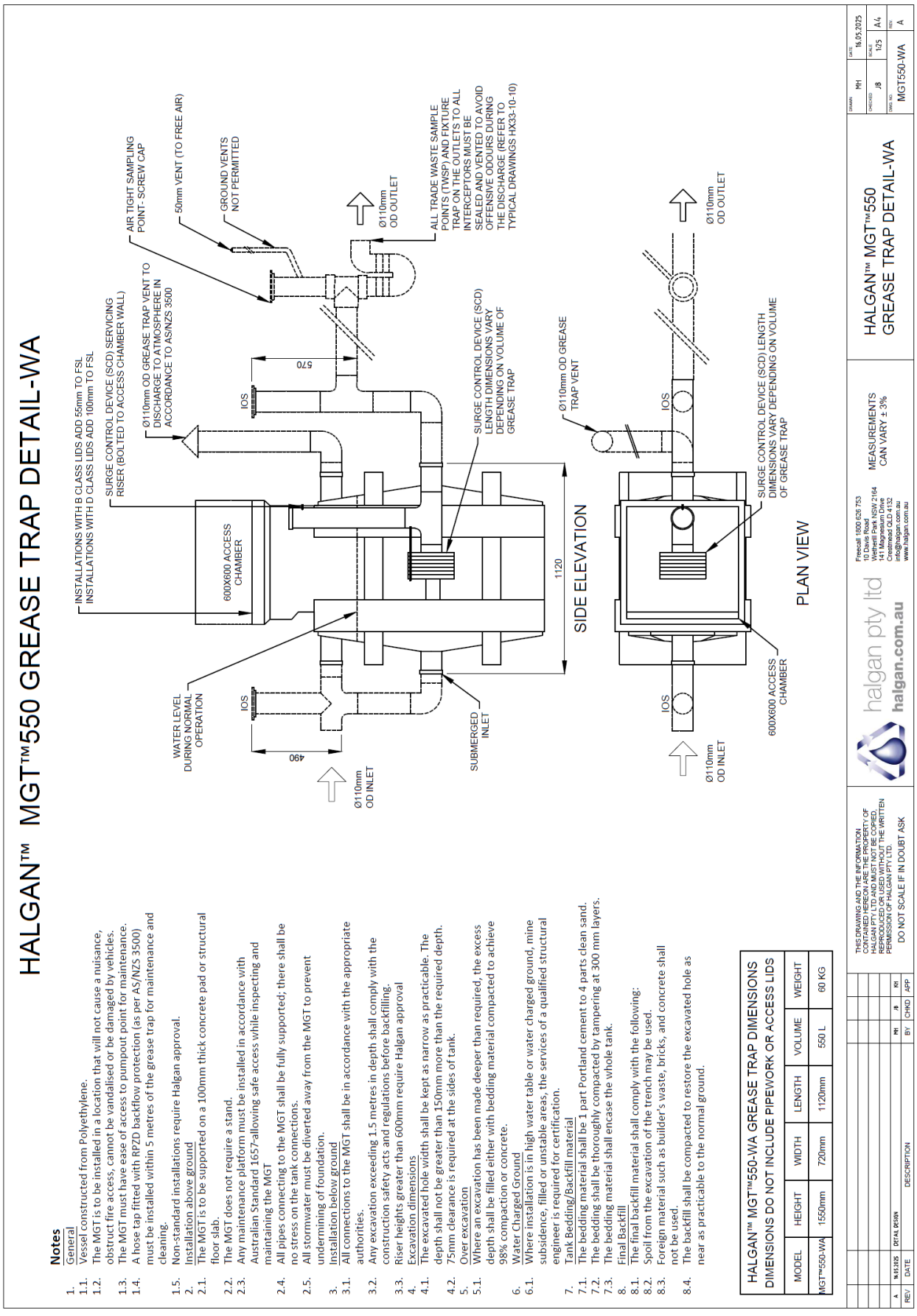
Clean and grease all mating surfaces of the cover and frame before replacing the cover.

3.0 Model Applicability

3.1.1 MGT

HALGAN™ MGT 550-1500 MODULAR GREASE TRAP DIMENSIONS DIMENSIONS DO NOT INCLUDE PIPEWORK OR ACCESS LIDS.							
MODEL	HEIGHT (mm)	WIDTH (mm)	LENGTH (mm)	VOLUME (L)	WEIGHT (KG)	INLET (mm)	OUTLET (mm)
MGT550	1550	720	1120	550	55	490	570
MGT1000	1550	720	2060	1000	100	490	570
MGT1500	1550	720	3000	1500	140	490	570

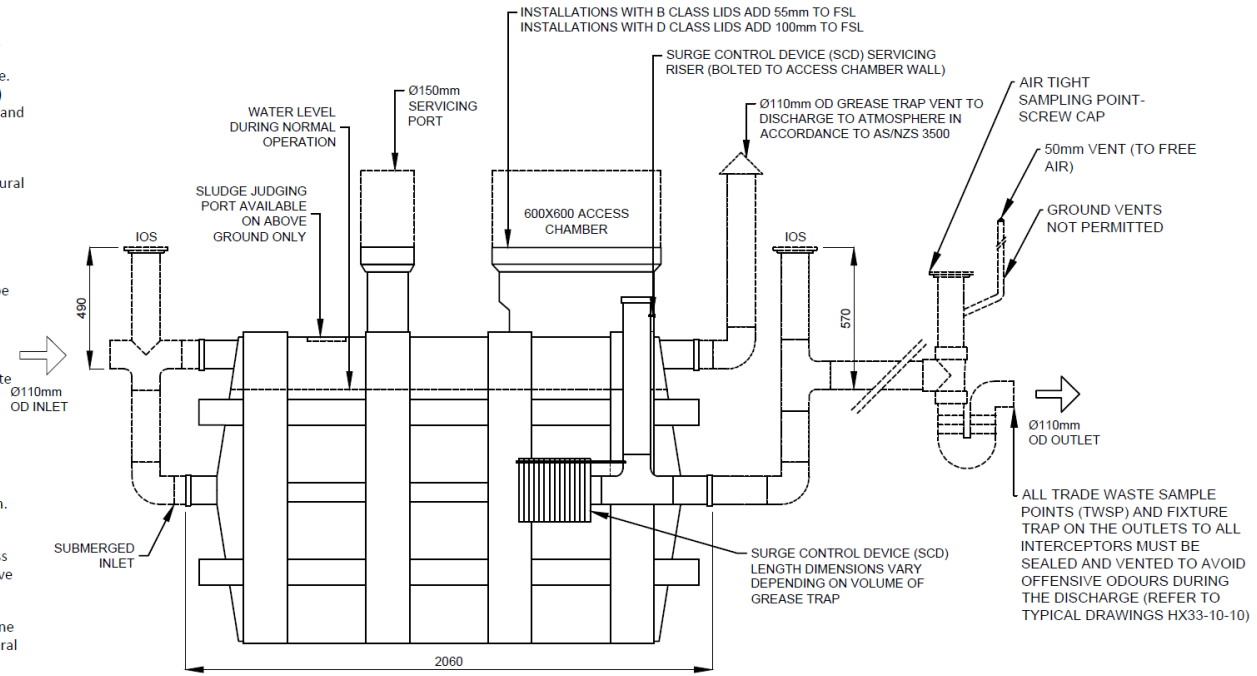
3.1.3 MGT Technical Drawing



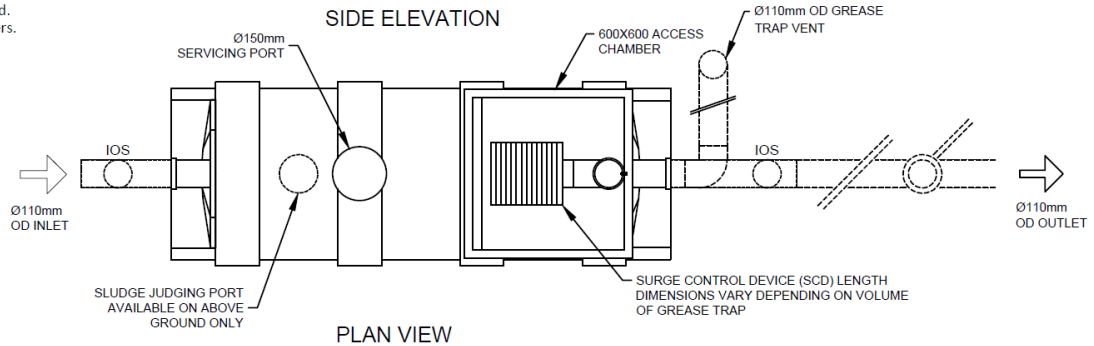
HALGAN™ MGT™1000 GREASE TRAP DETAIL-WA

Notes

1. General
1.1. Vessel constructed from Polyethylene.
1.2. The MGT is to be installed in a location that will not cause a nuisance, obstruct fire access, cannot be vandalised or be damaged by vehicles.
1.3. The MGT must have ease of access to pumpout point for maintenance.
1.4. A hose tap fitted with RPZD backflow protection (as per AS/NZS 3500) must be installed within 5 metres of the grease trap for maintenance and cleaning.
1.5. Non-standard installations require Halgan approval.
2. Installation above ground
2.1. The MGT is to be supported on a 100mm thick concrete pad or structural floor slab.
2.2. The MGT does not require a stand.
2.3. Any maintenance platform must be installed in accordance with Australian Standard 1657-allowing safe access while inspecting and maintaining the MGT
2.4. All pipes connecting to the MGT shall be fully supported; there shall be no stress on the tank connections.
2.5. All stormwater must be diverted away from the MGT to prevent undermining of foundation.
3. Installation below ground
3.1. All connections to the MGT shall be in accordance with the appropriate authorities.
3.2. Any excavation exceeding 1.5 metres in depth shall comply with the construction safety acts and regulations before backfilling.
3.3. Riser heights greater than 600mm require Halgan approval
4. Excavation dimensions
4.1. The excavated hole width shall be kept as narrow as practicable. The depth shall not be greater than 150mm more than the required depth.
4.2. 75mm clearance is required at the sides of tank.
5. Over excavation
5.1. Where an excavation has been made deeper than required, the excess depth shall be filled either with bedding material compacted to achieve 98% compaction or concrete.
6. Water Charged Ground
6.1. Where installation is in high water table or water charged ground, mine subsidence, filled or unstable areas, the services of a qualified structural engineer is required for certification.
7. Tank Bedding/Backfill material
7.1. The bedding material shall be 1 part Portland cement to 4 parts clean sand.
7.2. The bedding shall be thoroughly compacted by tampering at 300 mm layers.
7.3. The bedding material shall encase the whole tank.
8. Final Backfill
8.1. The final backfill material shall comply with the following:
8.2. Spoil from the excavation of the trench may be used.
8.3. Foreign material such as builder's waste, bricks, and concrete shall not be used.
8.4. The backfill shall be compacted to restore the excavated hole as near as practicable to the normal ground.



SIDE ELEVATION



PLAN VIEW

HALGAN™ MGT™1000-WA GREASE TRAP DIMENSIONS DIMENSIONS DO NOT INCLUDE PIPEWORK OR ACCESS LIDS					
MODEL	HEIGHT	WIDTH	LENGTH	VOLUME	WEIGHT
MGT™1000-WA	1550mm	720mm	2060mm	1000 L	100 KG

REV	DATE	DESCRIPTION	BY	CHKD	APP
A	16.05.2025	DETAIL DESIGN	MH	JB	KH

THIS DRAWING AND THE INFORMATION CONTAINED HEREON ARE THE PROPERTY OF HALGAN PTY LTD AND MUST NOT BE COPIED, REPRODUCED OR USED WITHOUT THE WRITTEN PERMISSION OF HALGAN PTY LTD.
DO NOT SCALE IF IN DOUBT ASK

halgan pty ltd
halgan.com.au
Freecall 1800 626 753
10, Davis Road
Wetherill Park NSW 2164
141, Magnesium Drive
Crestmead QLD 4132
info@halgan.com.au
www.halgan.com.au

MEASUREMENTS CAN VARY ± 3%

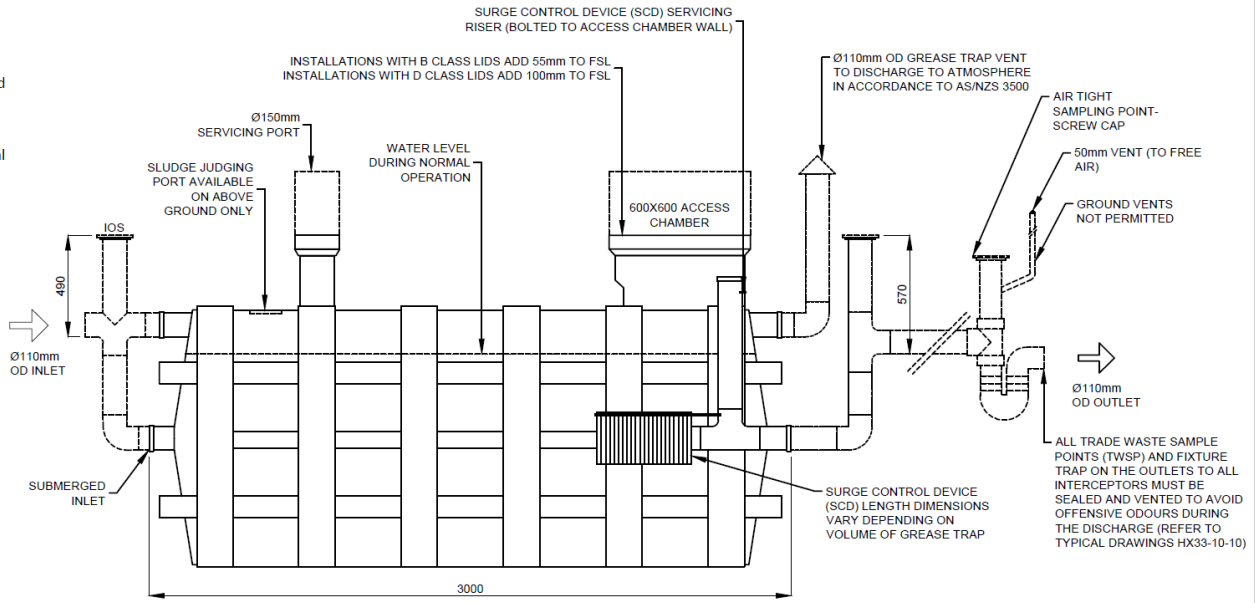
HALGAN™ MGT™1000
GREASE TRAP DETAIL-WA

DRAWN	DATE
MH	16.05.2025
CHECKED	SCALE
JB	1:25 A4
DWG NO.	REV.
MGT1000-WA	A

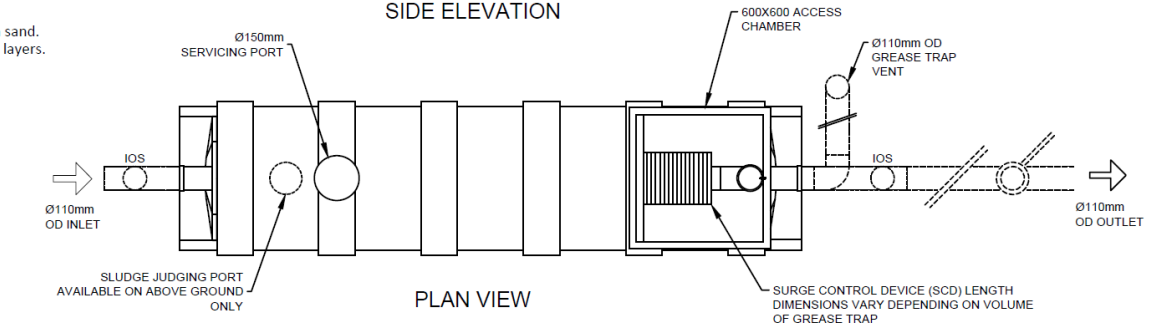
HALGAN™ MGT™1500 GREASE TRAP DETAIL-WA

Notes

1. General
1.1. Vessel constructed from Polyethylene.
1.2. The MGT is to be installed in a location that will not cause a nuisance, obstruct fire access, cannot be vandalised or be damaged by vehicles.
1.3. The MGT must have ease of access to pumpout point for maintenance.
1.4. A hose tap fitted with RPZD backflow protection (as per AS/NZS 3500) must be installed within 5 metres of the grease trap for maintenance and cleaning.
1.5. Non-standard installations require Halgan approval.
2. Installation above ground
2.1. The MGT is to be supported on a 100mm thick concrete pad or structural floor slab.
2.2. The MGT does not require a stand.
2.3. Any maintenance platform must be installed in accordance with Australian Standard 1657-allowing safe access while inspecting and maintaining the MGT
2.4. All pipes connecting to the MGT shall be fully supported; there shall be no stress on the tank connections.
2.5. All stormwater must be diverted away from the MGT to prevent undermining of foundation.
3. Installation below ground
3.1. All connections to the MGT shall be in accordance with the appropriate authorities.
3.2. Any excavation exceeding 1.5 metres in depth shall comply with the construction safety acts and regulations before backfilling.
3.3. Riser heights greater than 600mm require Halgan approval
4. Excavation dimensions
4.1. The excavated hole width shall be kept as narrow as practicable. The depth shall not be greater than 150mm more than the required depth.
4.2. 75mm clearance is required at the sides of tank.
5. Over excavation
5.1. Where an excavation has been made deeper than required, the excess depth shall be filled either with bedding material compacted to achieve 98% compaction or concrete.
6. Water Charged Ground
6.1. Where installation is in high water table or water charged ground, mine subsidence, filled or unstable areas, the services of a qualified structural engineer is required for certification.
7. Tank Bedding/Backfill material
7.1. The bedding material shall be 1 part Portland cement to 4 parts clean sand.
7.2. The bedding shall be thoroughly compacted by tampering at 300 mm layers.
7.3. The bedding material shall encase the whole tank.
8. Final Backfill
8.1. The final backfill material shall comply with the following:
8.2. Spoil from the excavation of the trench may be used.
8.3. Foreign material such as builder's waste, bricks, and concrete shall not be used.
8.4. The backfill shall be compacted to restore the excavated hole as near as practicable to the normal ground.



SIDE ELEVATION



PLAN VIEW

HALGAN™ MGT™1500-WA GREASE TRAP DIMENSIONS DIMENSIONS DO NOT INCLUDE PIPEWORK OR ACCESS LIDS					
MODEL	HEIGHT	WIDTH	LENGTH	VOLUME	WEIGHT
MGT™1500-WA	1550mm	720mm	3000mm	1500 L	140 KG

REV	DATE	DESCRIPTION	BY	CHKD	APP
A	16.05.2025	DETAIL DESIGN	MH	JB	KH

THIS DRAWING AND THE INFORMATION CONTAINED HEREON ARE THE PROPERTY OF HALGAN PTY LTD AND MUST NOT BE COPIED, REPRODUCED OR USED WITHOUT THE WRITTEN PERMISSION OF HALGAN PTY LTD.
DO NOT SCALE IF IN DOUBT ASK

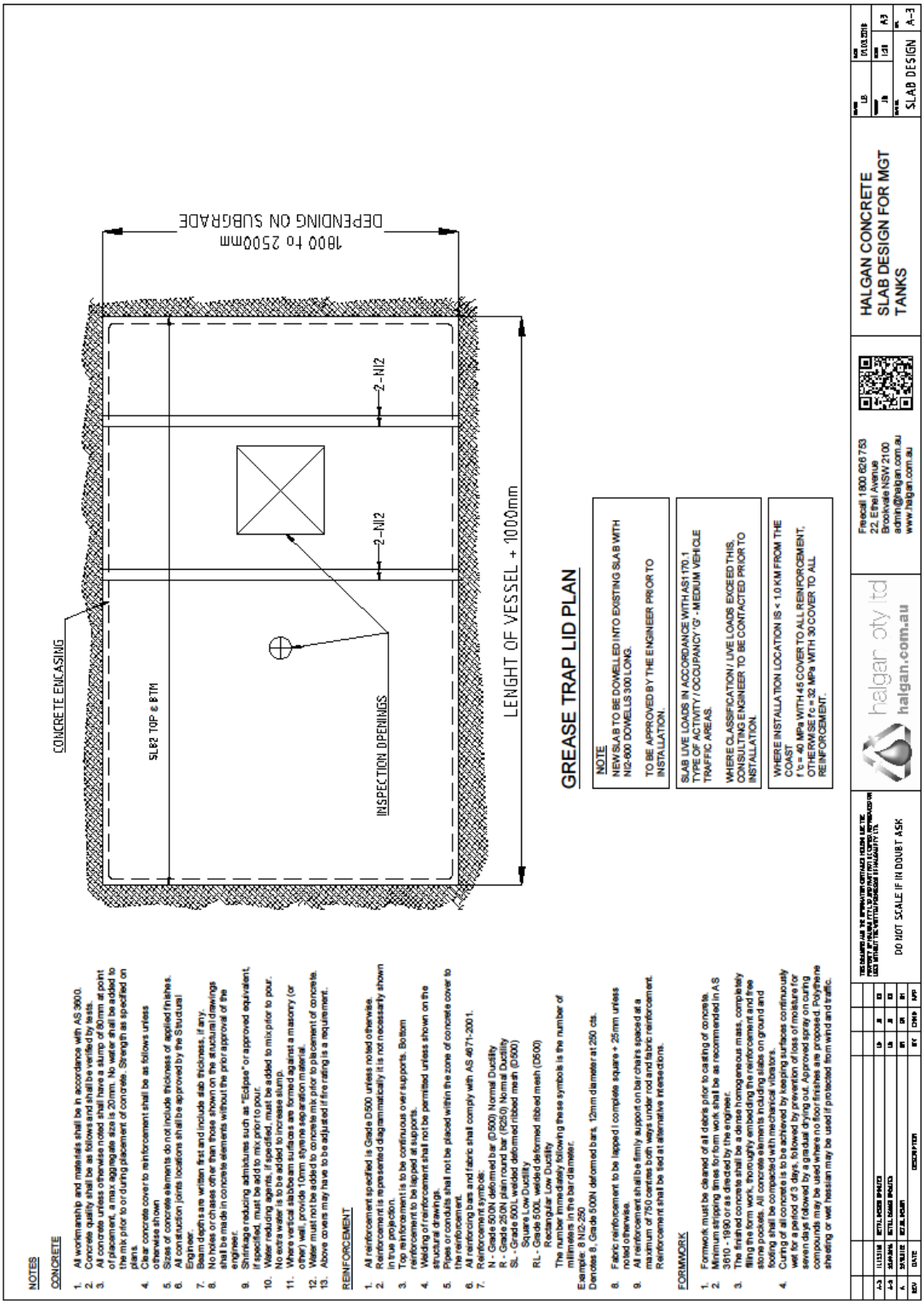
halgan pty ltd
halgan.com.au
Freecall 1800 626 753
10, Davis Road
Wetherill Park NSW 2164
141, Magnesium Drive
Crestmead QLD 4132
info@halgan.com.au
www.halgan.com.au

MEASUREMENTS CAN VARY ± 3%

HALGAN™ MGT™1500
GREASE TRAP DETAIL-WA

DRAWN	DATE
MH	16.05.2025
CHECKED	SCALE
JB	1:30 A4
DWG. NO.	REV.
MGT1500-WA	A

4.0.1 Ballast Slab Design MGT



HALGAN MODULAR GREASE TRAP FOR MAINTENANCE PROCEDURE

1.1 **Maintenance Frequency**

Any MGT Modular Grease Trap is to be serviced to the guide line of the local water authority's frequency.
The complete effluent content are to be serviced by a licensed / accredited collection contractor over 3, 6 or 9 month intervals. This is dictated by local water authority guidelines.
In Western Australia the transportation of controlled waste is regulated by the Department of Water and Environmental Regulation (DWER).

1.2 **Records**

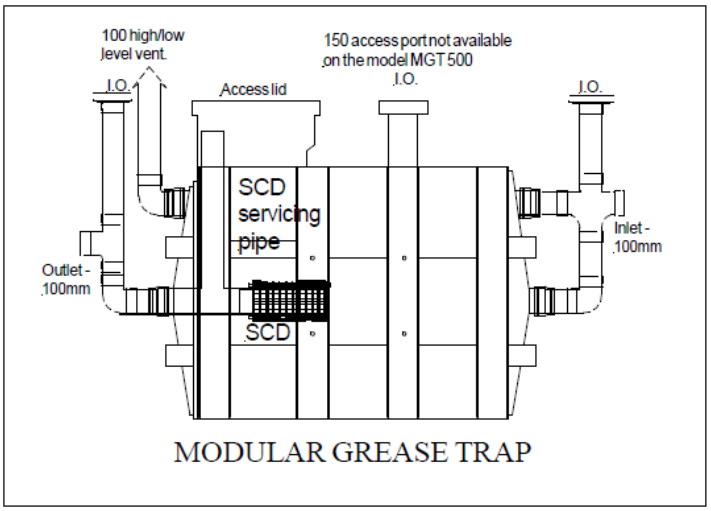
The customer shall keep and make available records pertaining to clean outs as specified in permit to discharge requirements with local water authorities and/or environmental protection departments.

1.3 **On-Site Cleaning Procedures**

The MGT vessel must be maintained as follows:
- Complete clean outs must be undertaken by a waste collection contractor accredited by the EPA. The contractor shall make a visual observation every time they service the vessel to confirm the product is on the correct service interval, correct operation of the product and product is in a suitable condition. If the service interval needs to be revised the customer is to be advised to make these arrangements. Notifying the water authority might also be required so they can update their records. The customer shall also make these changes on their records.

- The contractor shall make a visual observation every time they service the vessel to confirm the product is on the correct service interval, correct operation of the product and product is in a suitable condition. If the service interval needs to be revised the customer is to be advised to make these arrangements. Notifying the water authority might also be required so they can update their records. The customer shall also make these changes on their records.

SERVICING THE MGT MODULAR GREASE TRAP



Step One:
Remove all the MGT access lids and access port lids.

Step Two:
Insert the vacuum hose into the 100 mm SCD servicing pipe in the downstream MGT unit. Turn the vacuum pump on for 5 seconds.

Step Three:
Insert the vacuum hose into the access port of the upstream MGT unit and remove the greasy liquid waste from the MGT. Turn the kitchen taps on to flush out the drainage line and help the cleaning process.

Step Four:
Then insert the vacuum hose into access lid and remove any residual liquid waste. Repeat Step 3 and Step 4 in the remaining MGT units working downstream. Then use the designated hose tap to connect the hose for cleaning of the MGT. At this time, hose down the SCD unit.

Step Five:
Check the security of the SCD unit. If the plates from the SCD are damaged in any way then the SCD must be repaired or replaced immediately. If the connection of SCD has been broken or other plumbing connections have failed then these must be replaced immediately. The waste contractor should note on their clearance reports any damaged and failure of the SCD and plumbing pipework connecting the SCD.

Step Six:
Replace access lids and complete the appropriate servicing documents.