

INDUSTRIAL TRADE WASTE

GREASE INTERCEPTORS
OIL SEPARATORS
AND MORE

VIC Technical Specifications



GLASS-REINFORCED CONCRETE
The Strength Of Concrete
The Convenience Of Plastic

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Mascot Engineering

1300 885 295 | mascotengineering.com.au

About Mascot Engineering

Products you can trust from the proudly Australian-owned family business with over 98 years experience in the building industry.

Established in 1920, Mascot Engineering Group is wholly Australian owned and the largest manufacturer of Glass Reinforced Concrete (GRC) in the Southern Hemisphere. With offices and distribution centres throughout Australia, we can provide you with local service, technical support and stock regardless of where your next project is.

Originally an Iron Foundry, Mascot Engineering began working with GRC in the early 1980s, one of the first in Australia and one of the most experienced manufacturers of the material in the world. However this evolution of the company hasn't meant we've lost sight of our roots and today still manufacture cast and ductile iron access covers, grating and other municipal products.

The Mascot Engineering factory, circa 1920s



Australia's leading manufacturer of GRC

The strength of concrete. The convenience of plastic.

Mascot's GRC is a composite of concrete and fiberglass technologies. It has the benefits of both products: the solidity of concrete and the high instantaneous strength of resin fibreglass.

The design and manufacture of products from GRC is covered by a set of international standards and comes from over 30 years development. Currently GRC is manufactured in over 100 countries... its worldwide acceptance as a building material has also born a number of manufacturing methods. If concrete remains un-reinforced, it is strong in compression but weak in tension. Precast concrete is traditionally reinforced with steel; however these precast concrete products are not only corrosive but extremely heavy due to their overall thickness.

Mascot Engineering started working with Glass Reinforced Concrete (GRC) in the early 1980s, one of the first in Australia. Originally using the more traditional 'spray-up' method, we began developing wetcast GRC – today we are the largest manufacturer of Glass Reinforced Concrete products in the Southern Hemisphere.

As the fibreglass is through the entire product (not just reinforcing in some parts), we're able to achieve the strength of traditional steel reinforced concrete with a thinner section. This means that we can significantly reduce the weight of finished products – in some cases up to 1/10th the weight of a comparative product.

All Mascot Engineering GRC products have a minimum fibreglass content of 3% – this is to relevant industry standards and engineered for purpose.

Most components are designed to be lifted by one or two people so you don't need to tie up your backhoe, excavator or crane (and operator) for hours just to move product around on site and install.

GRC's absence of steel reinforcement makes it ideal for usage under normally corrosive conditions and is resistant to chemical attack.

Mascot's alkali resistant glass fibre: cut to size and weighed in each batch to ensure quality



Environmentally friendly

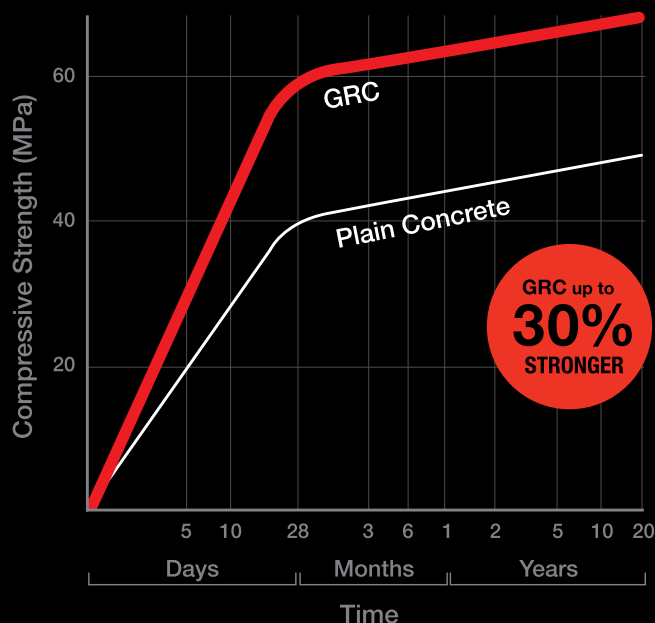
A lower environmental impact (approx 40%) than the equivalent steel reinforced product

GRC's lightweight nature is not only easy to install, it's also better for the environment than other materials. A study carried out as part of a UK Government/Concrete Industry Alliance project compared two precast concrete and GRC products that fulfil the same function. The results show that GRC has a lower environmental impact (around 40% less). The reduced environmental impact is due to the reduced cement usage per product and reduced transport costs.

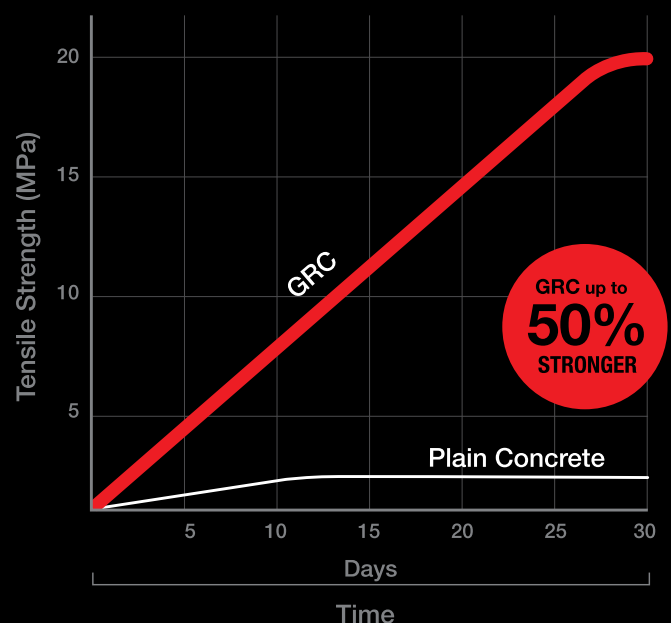
Mascot GRC: Did you know?

- ✓ It can be used wherever traditional concrete is required
- ✓ It's not brittle like polymer so it won't shatter
- ✓ There's no need to concrete encase in typical installations
- ✓ Easy pipe entries so no need to core drill
- ✓ Pipe entries can be made in any location
- ✓ It's engineered for all load ratings
- ✓ Approved to depths of 5 metres
- ✓ It contains no conductive and corrosive steel

Compressive Strength Comparison



Tensile Strength Comparison





Sourcing the highest grade materials from across the globe, we take care in every step of the manufacturing process resulting in superior quality, Australian manufactured product we are immensely proud of.

Design certification

Mascot Engineering Glass Reinforced Concrete (GRC) Pits, Risers, Channel and Covers

Mascot Engineering Group has been manufacturing their Glass Reinforced Concrete (GRC) range since 1984. Up until 2005, design and certification was provided by Rickard and Partners Pty Ltd, under the supervision of Principal Charles Rickard. Since 2005, that support has continued from Mr Rickard practising as RH Consulting Engineers (see website for reference). We make the following comments regarding the product range.

Method of Manufacture

Mascot Engineering use a vibration, wet cast premix GRC technique for all their product range. This technique was originally developed by Pilkington Bros in the 1950s.

Application

Mascot Engineering GRC pits and risers range are applicable to be installed in trafficable areas (roads and driveways), garden beds / parks, service access roads, sporting venues, rail corridors, shopping centres, water treatment plants, power stations and any other application where a pit chamber is required. All applications are supported by installation instructions and methodology.

Characteristic MOR GRC Strength at 28 days

- Vertical bending; 7.5MPa
- Horizontal bending; 16.5MPa

Durability

The very high cement content in Mascot Engineering's GRC ensures that it is equivalent to 80MPa concrete and therefore has very high resistance to corrosion. The fire resistance / surface burning rating, chemical resistance and water absorption details are attached. Refer to Characteristics of GRC.

Lateral Impact and Live Load Surcharges

In reference to the live load surcharges on pit walls, we consider that Mascot GRC pit chambers are suitable to withstand the lateral earth pressures in excess of 20KPa.

Mascot GRC pits and risers have been designed and manufactured to endure the vertical and horizontal forces due to the live loading delivered by heavy articular vehicles and rail carriages.

From tests conducted relating to GRC curing and strength over a period of time, the MPa rating of Mascot GRC reached 60Mpa over 28 days (Refer to Mascot GRC GR Concrete Facts sheet).

Mascot GRC Covers

Should the Engineers specification require non conductive covers, Mascot manufactures a GRC lightweight pedestrian duty cover for their pit chamber range.

Pipe / Conduit Penetrations

Pipe / Conduit penetrations are made possible in an endless variety of geometrics so as to not compromise the installation. This includes the scenario where a conduit penetrates a pit wall through the strength rib. In strict accordance with specification, reinstatement of structural integrity is achieved in that case by 'bonding' the pipe to the pit wall with Mascot's Epoxy Resin Compound. This allows the crush strength of the pipe to be called upon.

Specification and Installation

Refer to the standard specification sheet for Mascot GRC pit chambers and installation instructions to satisfy Class A to Class D load ratings in various surface applications and in accordance with AS 3996:2006.

In addition to their standard installation methods, also available are:

- installation instructions for a Class G load rating ideally for Airports and Container handling yards
- installation instructions for Pit Chambers to be installed in excess of 1800mm in depth

Where the Design Engineers Specification for installation varies to the Mascot Engineering Installation instructions, installers should seek further advice. To ensure maximum value from the product design calculations and test load results, it is strongly advised that the contractor familiarise themselves with the recommended method of installation to cater for the correct loads to be superimposed. This issue of care during installation will most certainly be the determining factor as to the quality, longevity and service life of the product.

Charles Rickard FIEAust, FIStructE, MICE, CEng, MIPENZ, NPR-3

RH Consulting Pty Ltd

Specialist Structural, Civil, Façade & Diagnostic Engineer

Properties of Mascot GRC

Mechanical properties	
<p><u>Compressive strength</u> The enclosure's wall/base is subject to compressive loads in use and needs to withstand specific loads</p>	80MPa typical
<p><u>Flexural strength</u> Affects site handling and when enclosure is installed in areas where encasement and soils are suspect</p>	24MPa
<p><u>Tensile strength</u> Generally only relevant to an enclosure's lid/cover</p>	20MPa
Thermal/Electrical properties	
<p><u>Water absorption</u> The enclosure's wall/base is designed to keep moisture away from its contents where possible</p>	< 5%
<p><u>Electrical resistivity</u> The electrical insulation capability of an enclosure's materials</p>	$1 \times 10^8 \Omega/\text{sq}$
<p><u>Freeze thaw</u> Inability to withstand freeze-thaw cycles causes surface spoiling and leads ultimately to an enclosure's failure</p>	Modulus of elasticity unchanged
<p><u>Coefficient of expansion/contraction</u> Excessive movement between enclosure's wall/base and encasement materials (usually concrete) creates unwanted stresses which may lead to failure</p>	$10 \times 10^{-6} \text{ deg C}$
<p><u>Water vapour transmission</u> WVT is a measure of water vapour flow through a material. Passage of water vapour may be critical in some instances</p>	$1 \times 10^{-4} \text{ gm/s. Mn}$
Surface properties	
<p><u>Surface burning</u> Cable enclosures are often used around petrol stations, chemical processing and interior applications and may be subject to fire. They should be non-flammable and not give off fumes or smoke</p>	Non combustible. Ignitability: P Fire propagation: 0 Flame spread: Class 1 Fire resistance: 1 hour for 10mm thickness
<p><u>Weathering</u> The majority of cable enclosures are used in exterior applications. Ability to withstand adverse weather will ensure long service life (erosion, UV degradation, etc.)</p>	UV Stable Good as H.S. Concrete
<p><u>Chemical Resistance</u> Cable enclosures may be subject to acidic or alkaline soils</p>	Excellent. Equivalent to 80MPa concrete

Benefits of Mascot GRC



Freight

Heavy duty, lightweight. You will run out of space before you do weight when transporting Mascot GRC Pits and Risers. To repeat this with traditional concrete will require four semis – and unlike other 'lightweight' products, Mascot's will arrive in one piece.



Proven in all applications

Mascot's products have been used all over Australia and is approved or used by major infrastructure companies and projects. Road, rail, residential, airports, ports, water, electrical and communications services, industrial, commercial, driveways, gardens, pools, sports stadiums, substations, mines and many more.



Versatile

With a huge range of sizes and depths as well as covers and grates to suit all load ratings, Mascot has the product to suit your project.



Where you want, when you want

Along with all the necessary approvals, Mascot Engineering has distribution centres throughout Australia – offering you local manufacturer support as well as local deliveries.



The easiest pipe entries in the industry

Pipe entries can be made in any location with a ball peen hammer – easy.

Introduction to Trade Waste

We've gone through all the approvals, but most importantly, we've stood the test of time

With the largest range of approved GRC Trade Waste products in Australia, Mascot Engineering is the only name you need to think of for your next project.

All products are manufactured from Glass Reinforced Concrete (GRC) ensuring your on-site and transportation costs are kept to a minimum – vital when you're dealing with such large and bulky products. Take our Grease Arrestors for example; our GA100 (1000L) weighs 324kg and is designed to fit through a standard doorway – a steel reinforced concrete equivalent weighs in at over 2.5 tonne!

Generally a Hydraulic Engineer in association with the local water authority or council will assess your proposed use and recommend a pre-treatment device and the size required. Most products are supplied standard with 100mm PVC fittings, however different sizes as well as Cast Iron or HDPE fittings can be included.

If you are building or run one of the following businesses, you may need a Mascot Trade Wastewater Pre-Treatment Device.

Retail Food

- Restaurant
- Take-away food outlet
- Function centre
- Hospital
- Nursing Home
- Caterer
- Butcher
- Delicatessen
- Bakery

Photographic

- Photographic Labs
- X-Ray Facility

Automotive

- Service Station
- Panel Beater / Spray Painter
- Car Wash / Detailer
- Auto Recycler

Commercial Laundries

- Laundromats
- Commercial Laundries (Hospital, Nursing Home, Hotel etc)

Please note, these are an indication only and you should rely on your own enquiries with your local council or water authority

Mascot Engineering trade waste products are approved, authorised or used in the following water authority areas:

- Sydney Water
- WA Water Corporation
- ACTEW Water
- Queensland Urban Utilities
- Melbourne Water
- Hunter Water
- City West Water
- Yarra Valley Water
- TasWater








- Gladstone Area Water Board
- Logan City Council
- Barwon Water
- City of Gold Coast
- SEQ Water
- Unity Water
- Gippsland Water
- Central Highlands Water
- Western Water

- South East Water
- Goulburn Valley Water
- SA Water
- City of Townsville
- Power Water
- Coliban Water
- Redland Water
- Shoalhaven Water
- TasWater

Load classification (AS3996)

Access Covers and Grates are designated by classes A, B, C, D, E, F & G according to load capacity set out in the table below. This table is an extract from AS3996-2006.

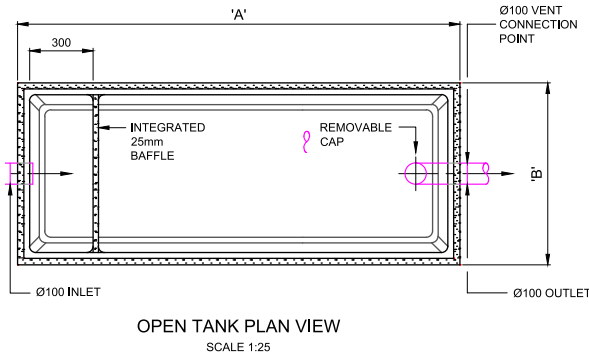
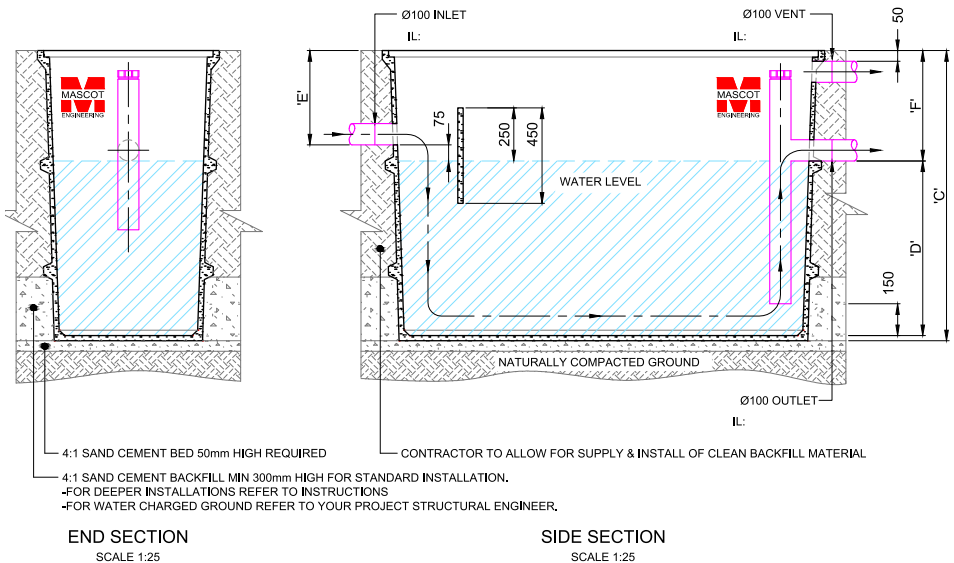
The appropriate class for a cover or grate depends on the location of installation. Some examples are outlined in this table; however it is the responsibility of the designer to ensure an appropriate class is selected and/or specified. Specifics of the location should be taken into consideration when selecting the right cover or grate. The speed of traffic, wheel type and the physical position (turning area) should all be assessed.

Type	Class	Typical use	Ultimate limit state design load (kN)	Serviceability design loading (kN)	Nominal wheel loading (kg)
	A	Areas (including footways) accessible only to pedestrians and cyclists and closed to other traffic (extra light duty)	10kN	6.7kN	330kg
	B	Areas (including footways and light tractor paths) accessible only to vehicles (excluding commercial vehicles) or livestock (light duty)	80kN	53kN	2,670kg
	C	Malls and areas open to slow moving commercial vehicles (heavy duty)	150kN	100kN	5,000kg
	D	Carriageways of roads and areas open to commercial vehicles (heavy duty)	210kN	140kN	8,000kg
	E	General docks and aircraft pavements (extra heavy duty – E)	400kN	267kN	13,700kg
	F	Docks and aircraft pavements subject to high wheel loads (extra heavy duty – F)	600kN	400kN	20,000kg
	G	Docks and aircraft pavements subject to very high wheel loads (extra heavy duty – G)	900kN	600kN	30,000kg

Notes

1. Nominal wheel loads are given as a guide only. Consideration should be given to the type, size and pneumatic pressure of the load applied. 2. Class B design loads exceed AS5100.2 requirements for footway loading. 3. Class D design loads exceed AS5100.2 requirements for a W80 wheel load. 4. Class C loads are based on an intermediate load. 5. The serviceability load is set at 2/3 of the ultimate limit state design load. 6. A force of 1kN approximately equal to 100kg.

Grease Interceptors



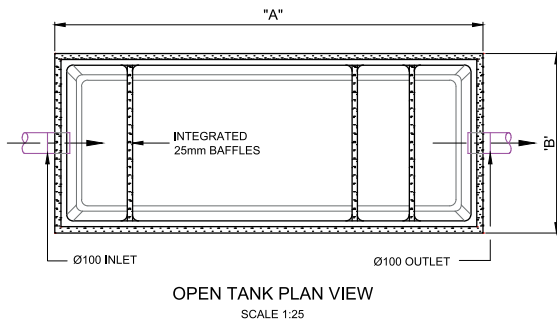
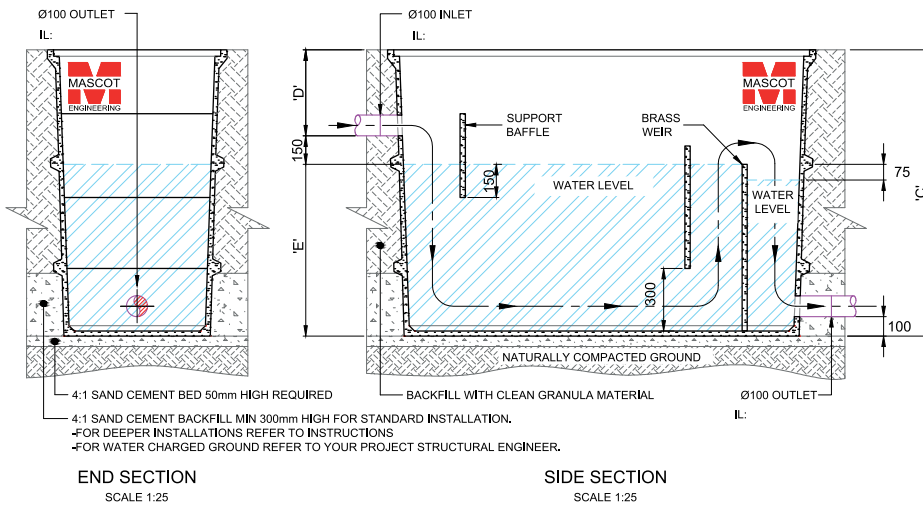
Notes

1. Tested and approved for installations up to 5000mm deep
2. 300mm risers available
3. Large range of concrete surrounds and covers to suit all load ratings
4. MPa rating for GRC: 60 MPa @ 28 days
5. Available extras:
 - (a) Step irons
 - (b) Support frame & work platforms for above ground installations
6. Other pipe sizes available upon request
7. Fitted standard with PVC fittings. Other material (HDPE etc) available
8. Cover will add to overall depth
9. Internally coated with acid resistant tar epoxy paint

Product Code	Capacity (L)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Mass (kg)
VGA600	600	1000	705	1340	1340	150	225	160
VGA1100	1100	2090	860	1370	1370	445	520	490
VGA1500	1500	2090	860	1370	1370	245	320	490
VGA2000	2000	2090	860	1670	1670	195	270	610
VGA2500	2500	2090	860	1970	1970	195	270	730
VGA3000	3000	2090	860	2270	2270	195	270	840
VGA4000	4000	Use 2 x VGA 2000 in-series. Call for details.						1220
VGA5000	5000	Use 2 x VGA 2500 in-series. Call for details.						1480

For Cover details, see page 25

General Purpose Pits



Notes

1. Tested and approved for installations up to 5000mm deep.
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4. MPa rating for Mascot GRC: 60MPa @ 28 days.
5. Available extras:
 - a. Step Irons
 - b. Support frame & work platforms for above ground installations
6. Other pipe sizes available.
7. Fitted standard with PVC fittings. Other material (HDPE etc) available.
8. Cover may add to overall depth.
9. Internally coated with acid resistant tar epoxy paint.

Product Code	Capacity (L)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Mass (kg)
GP100	1000	2050	860	1370	400	820	400
GP150	1500	2050	860	1670	300	1220	470
GP200	2000	2050	860	1970	200	1620	550

For Cover details, see page 25

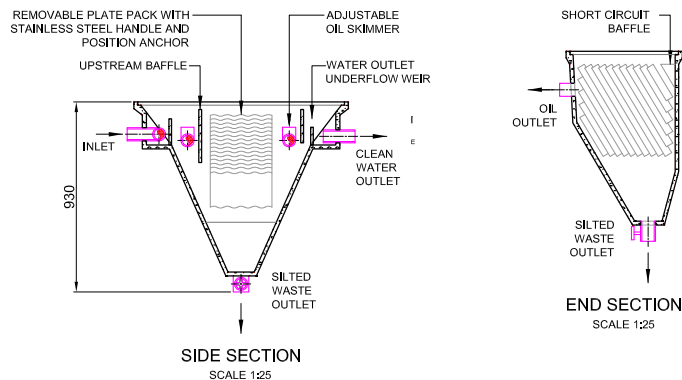
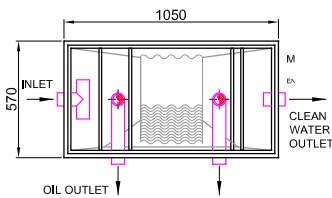
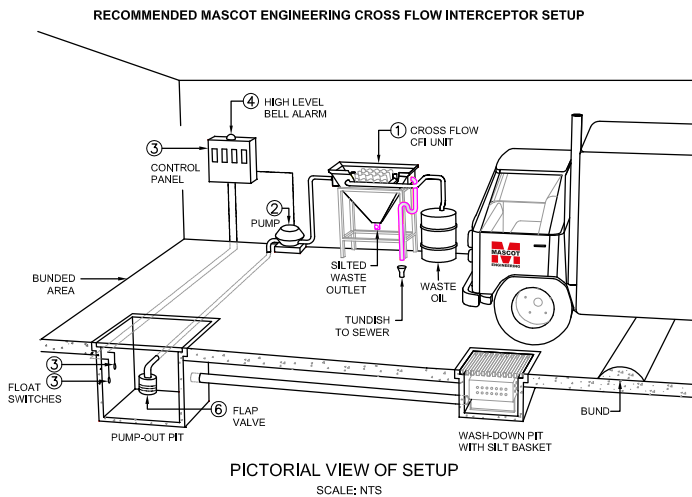
CFI Oil Separators

Australian designed and manufactured, the Mascot CFI unit is one of the most efficient on the market. Units can be supplied in two standard models and are capable of reducing the oil content in the effluent to less than 10 parts per million:

CFI15 — up to 1500L per hour

CFI30 — up to 3000L per hour

Wash-Down and Pump-Out Pits are also available in our unique Glass Reinforced Concrete (GRC) for easy installation.



Cross Flow Units

No.	Product Code	Description
1	CFI15	1500L CFI Unit
1	CFI30	3000L CFI Unit

Above CFI Units come complete with CFI Unit, Plate Pack, Stand and Covers

Pumps

No.	Product Code	Description
2	CFICP25	Progressive Cavity Pump for CFI15
2	CFICP800	Progressive Cavity Pump for CFI30

No.	Product Code	Description
2	CFI15ASM	Diaphragm Pump for CFI15
2	CFI30ASM	Diaphragm Pump for CFI30

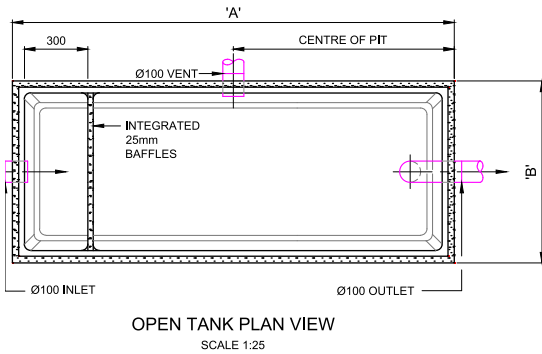
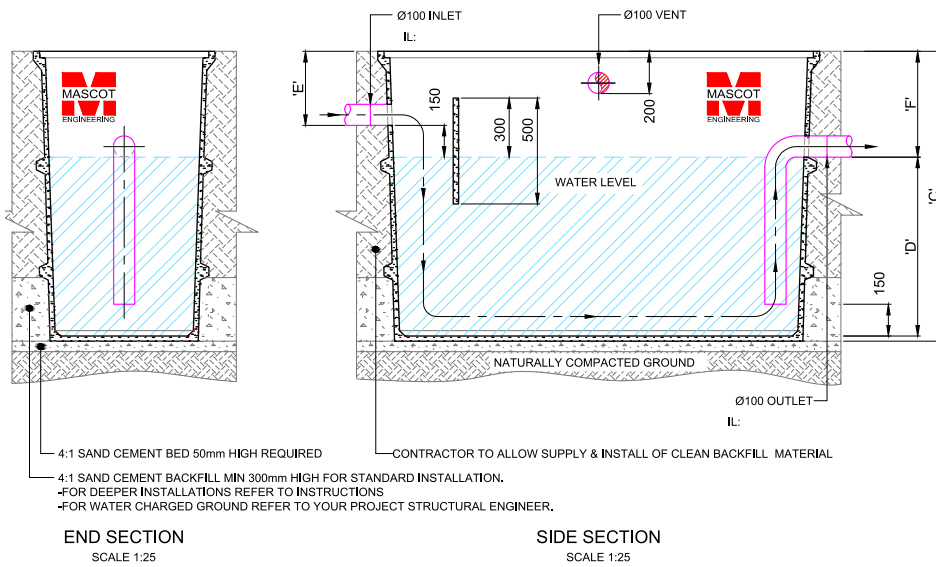
Above pumps are progressive cavity 240 Volt (Non flame proof). 415 Volt and flame proof options are available. Please confirm with your local water authority if a Diaphragm or Progressive Cavity Pump is required.

Accessories

No.	Product Code	Description
3	CFICP	Control Panel
4	CFIBA	Bell Alarm
5	CFIF6	Float Switch (1 only)
6	CFIFV15	Flap Valve for CFI15
6	CFIFV30	Flap Valve for CFI30

Wash down and pump-out pits are also available in our unique Glass Reinforced Concrete GRC for easy installation

Petrol and Oil Separators

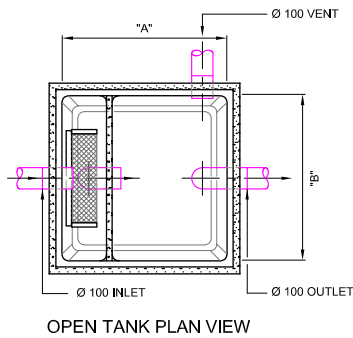
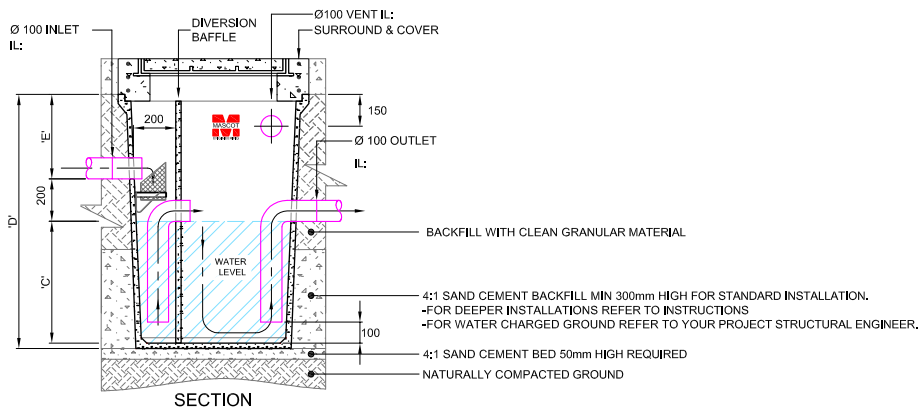


Notes

1. Tested and approved for installations up to 5000mm deep
2. 300mm risers available
3. Large range of concrete surrounds and covers to suit all load ratings
4. MPA rating for GRC: 60 MPa @ 28 days
5. Available extras:
 - (a) Step irons
 - (b) Support frame & work platforms for above ground installations
6. Custom features to this tank are available upon request
7. All pipe fittings are HDPE and 100mm as standard. Other sizes available
8. Installation instructions must be followed
9. Cover will add to overall depth
10. Internal surfaces are coated with acid resistant tar epoxy paint

Product Code	Capacity (L)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Mass (kg)
VPO1100	1100	2090	860	1370	845	350	500	490
VPO1500	1500	2090	860	1370	995	200	350	490
VPO2000	2000	2090	860	1670	1295	200	350	610
VPO2500	2500	2090	860	1970	1595	200	350	730

Straining and Cooling Pits

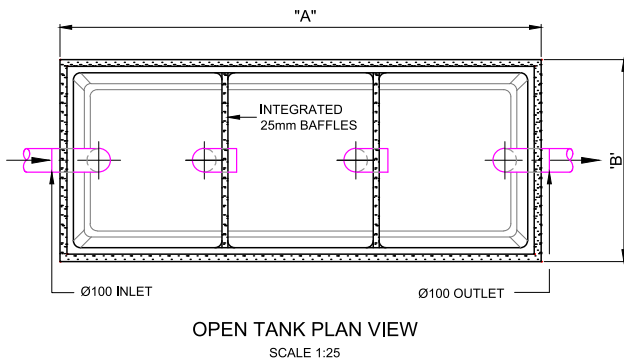
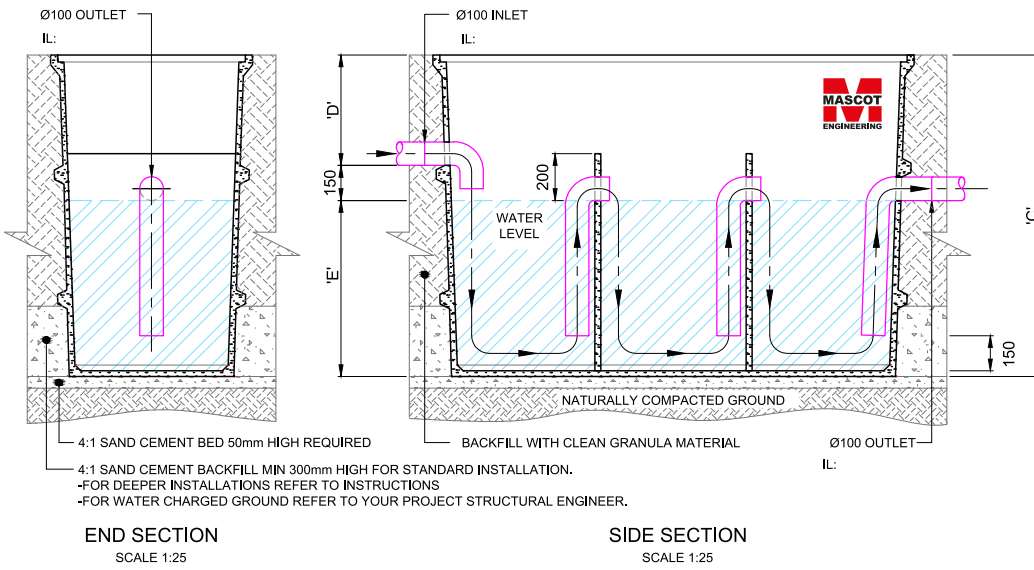


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4. MPa rating for GRC: 60 MPa @ 28 days
5. Available extras:
 - (a) Step irons
 - (b) Support frame & work platforms for above ground installations
6. Other pipe sizes available upon request
7. Fitted standard with PVC fittings. Other material (HDPE etc) available
8. Cover will add to overall depth
9. Internally coated with acid resistant tar epoxy paint
10. Above weights do not include cover

Product Code	Capacity (L)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Mass (kg)
VAMDCL2	200	600	600	600	1125	325	1225	115
VAMDCL4	400	900	900	600	1075	275	1225	205
VAMDCL6	600	900	900	750	1075	125	1225	230
VAMDCL8	800	1100	1100	720	1225	305	1425	375
VAMDCL10	1000	1100	1100	900	1525	425	1725	475
VAMDCL12	1200	1100	1100	1075	1525	250	1725	510
VAMDCL15	1500	1100	1100	1350	1825	275	2025	570

Triple Interceptors



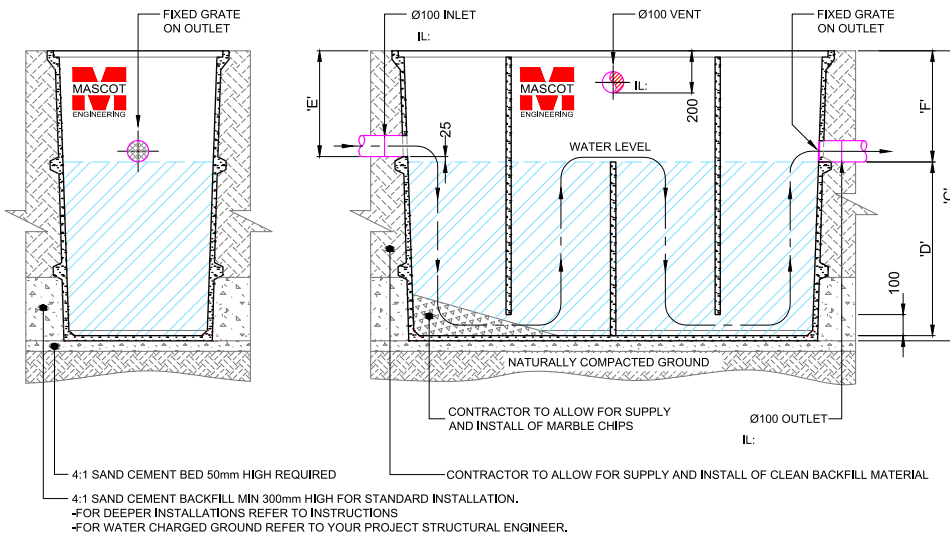
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5. Available extras:
 - a. Step Irons
 - b. Support frame & work platforms for above ground installations
6. Other pipe sizes available.
7. Fitted standard with PVC fittings. Other material (HDPE etc) available.
8. Cover may add to overall depth.
9. Internally coated with acid resistant tar epoxy paint.

Product Code	Capacity (L)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Mass (kg)
TI100	1000	2050	860	1370	470	750	400
TI150	1500	2050	860	1670	420	1100	470
TI200	2000	2050	860	1970	320	1500	540

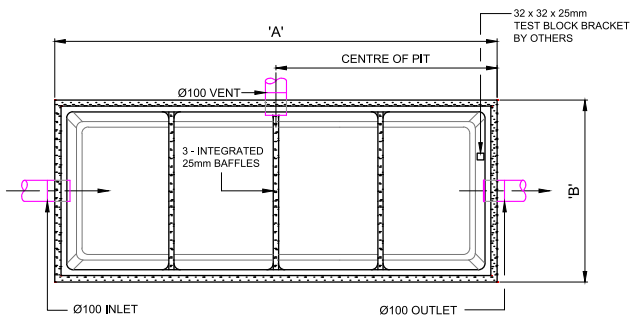
For Cover details, see page 25

Acid Neutraliser Tanks



END SECTION
SCALE 1:25

SIDE SECTION
SCALE 1:25



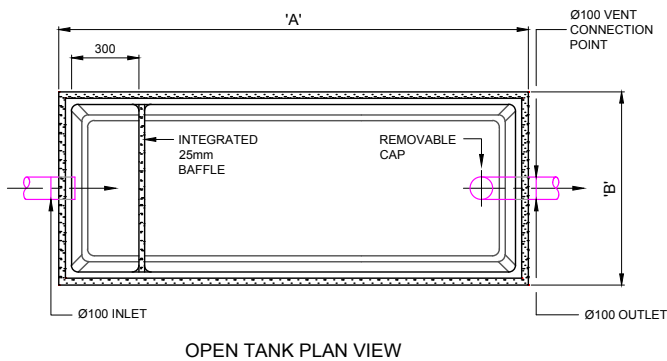
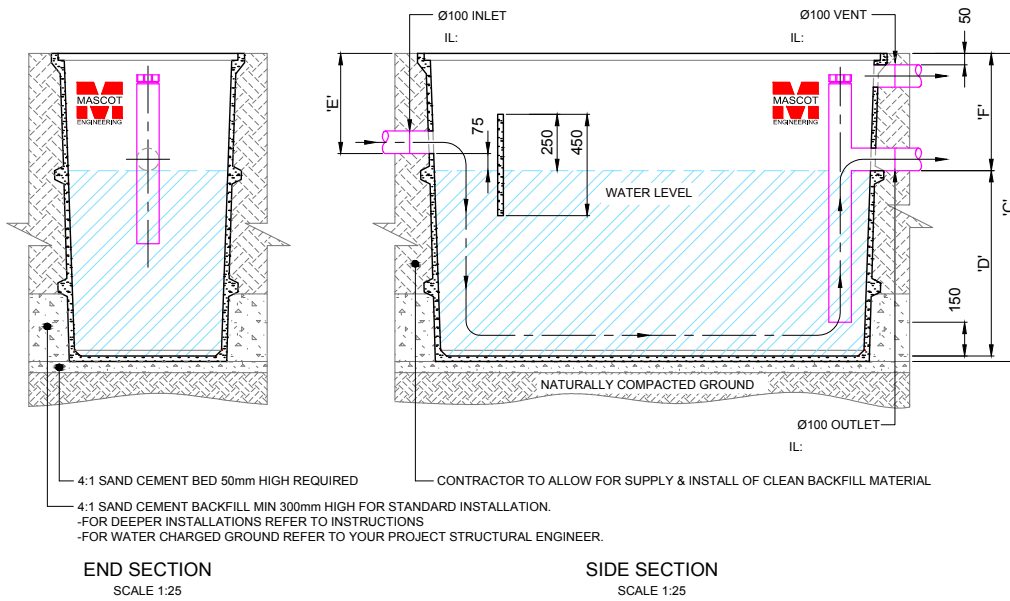
OPEN TANK PLAN VIEW
SCALE 1:25

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5. Available extras:
 - (a) Step irons
 - (b) Support frame & work platforms for above ground installations
6. Custom features to this tank are available upon request
7. Fitted standard with PVC fittings. Other material (HDPE etc) available.
8. Cover will add to overall depth

Product Code	Capacity (L)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Mass (kg)
VANT1100	1100	2090	860	1370	845	500	525	490
VANT1500	1500	2090	860	1370	995	350	375	510
VANT2000	2000	2090	860	1670	1295	350	375	650
VANT2500	2500	2090	860	1970	1595	350	375	750

Settling Tanks

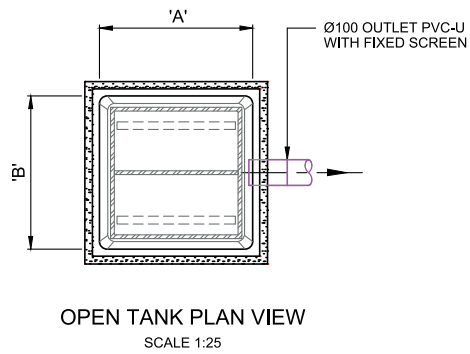
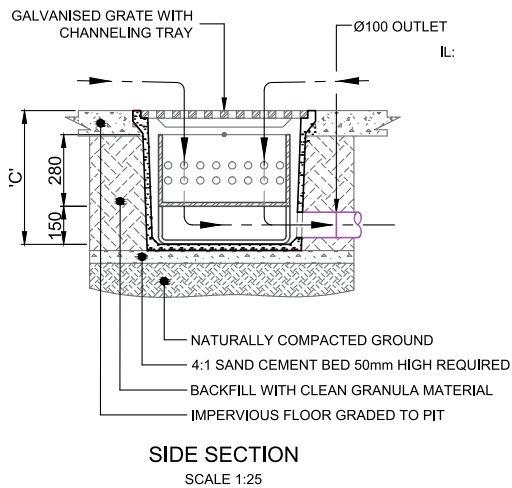


Notes

1. Tested and approved for installations up to 5000mm deep
2. 300mm risers available
3. Large range of concrete surrounds and covers to suit all load ratings
4. MPa rating for GRC: 60 MPa @ 28 days
5. Available extras:
 - (a) Step irons
 - (b) Support frame & work platforms for above ground installations
6. Custom features to this tank are available upon request
7. Fitted standard with PVC fittings. Other material (HDPE etc) available.
8. Cover will add to overall depth

Product Code	Capacity (L)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Mass (kg)
VST600	600	1000	705	1340	1090	225	250	160
VST1100	1100	2090	860	1370	825	520	545	490
VST1500	1500	2090	860	1370	1025	320	345	490
VST2000	2000	2090	860	1670	1375	270	295	610
VST2500	2500	2090	860	1970	1675	270	295	730

Floor Silt Arrestors

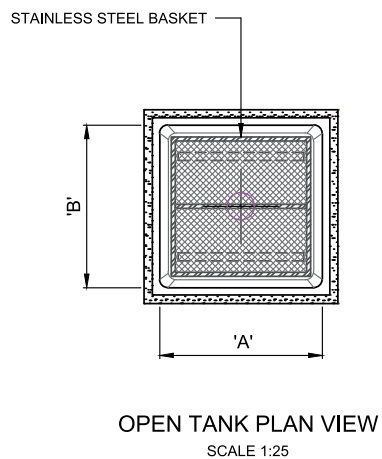
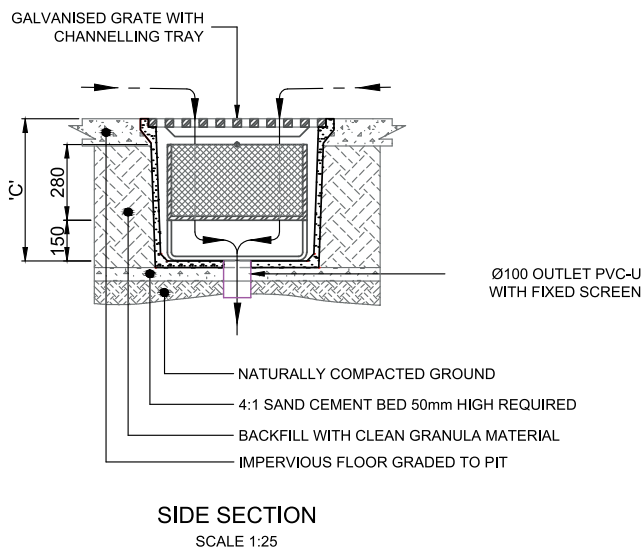


Product Code	A (mm)	B (mm)	C (mm)	Mass (kg)
FSA4	450	450	525	70
FSA6	600	600	525	120

Notes

1. Internally coated with acid resistant tar epoxy paint.
2. MPa rating for Mascot GRC – 60 MPa @ 28 days.
3. Fitted standard with PVC fittings. Other materials (HDPE) available.

Floor Basket Arrestors

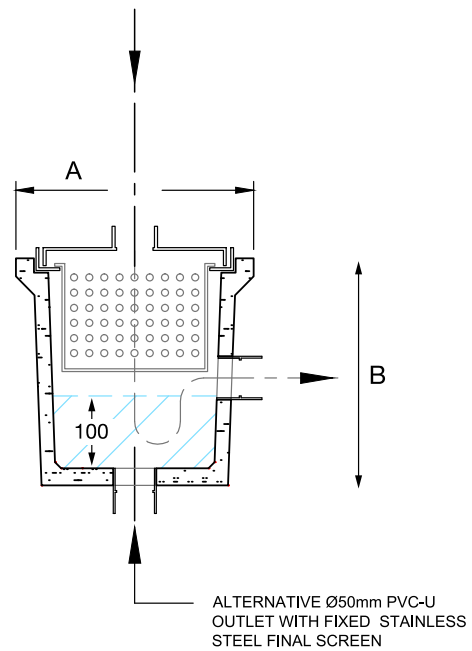
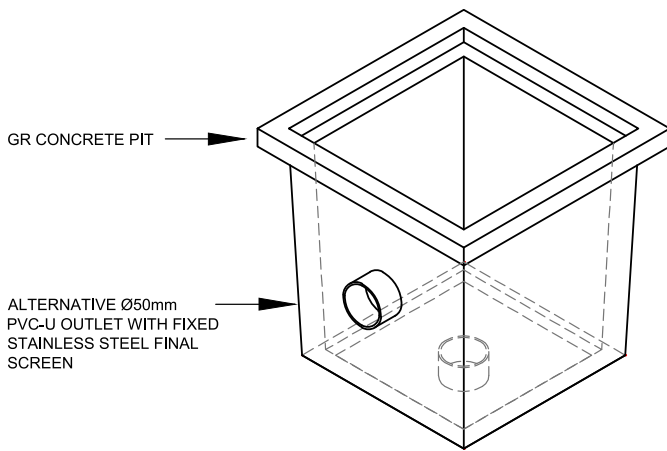
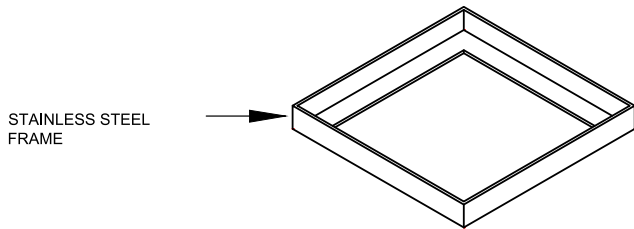
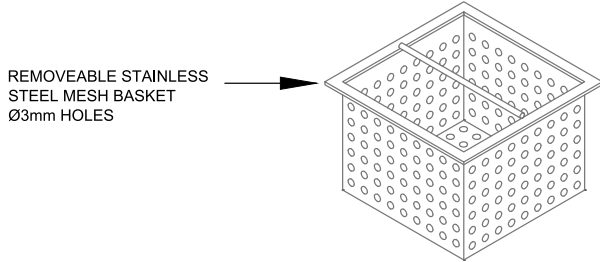
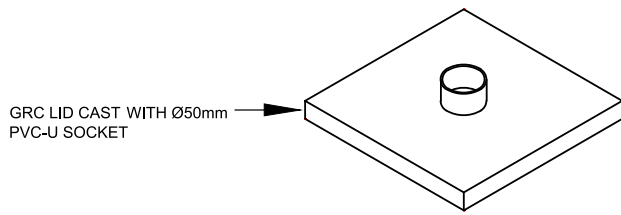


Product Code	A (mm)	B (mm)	C (mm)	Mass (kg)
FBA4	450	450	525	39
FBA6	600	600	525	65

Notes

1. Internally coated with acid resistant tar epoxy paint.
2. MPa rating for Mascot GRC – 60 MPa @ 28 days.
3. Fitted standard with PVC fittings. Other materials available.

Under Sink Plaster Traps



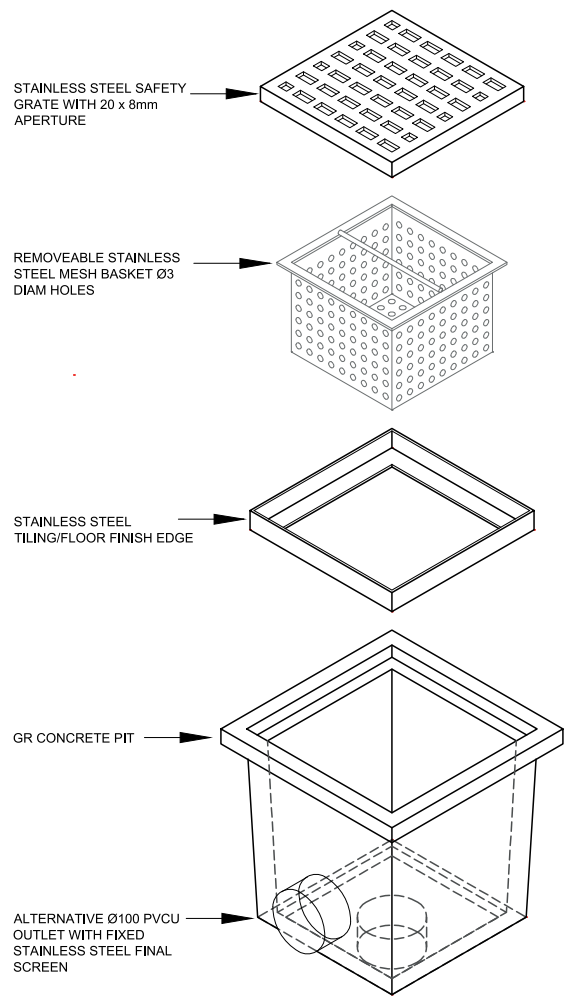
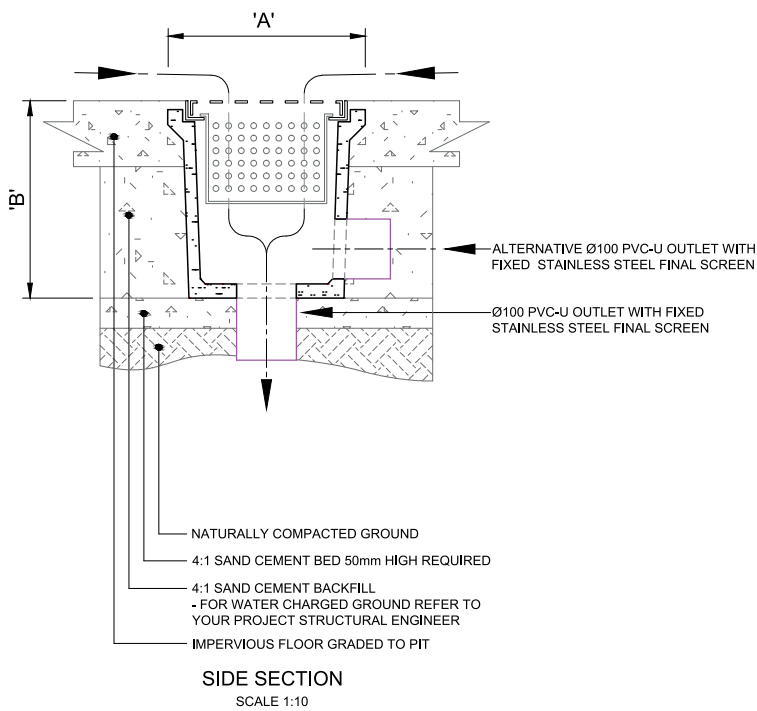
SIDE SECTION
SCALE 1:10

Product Code	A (mm)	B (mm)	Mass (kg)
PST1S (Side Outlet)	330	320	15
PST1B (Bottom Outlet)	330	320	15

Notes

1. Optional outlet position for ease of installation.
2. Standard inlet/outlet is Ø50mm PVC-U. Other diameters and materials available on request.
3. Finer filter media or screens available for smaller waste particles.
4. Stainless steel filters ensure durability.
5. Airtight lid prevents odour leakage.
6. Ideal as an under-sink arrestor for dental surgeries, plaster moulders, etc.
7. MPa rating for Mascot GRC – 60 MPa @ 28 days.

Stainless Steel Basket Arrestors

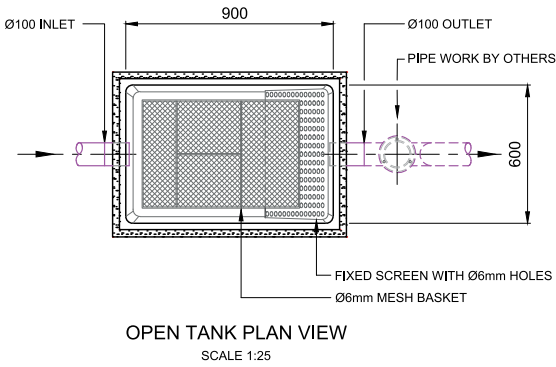
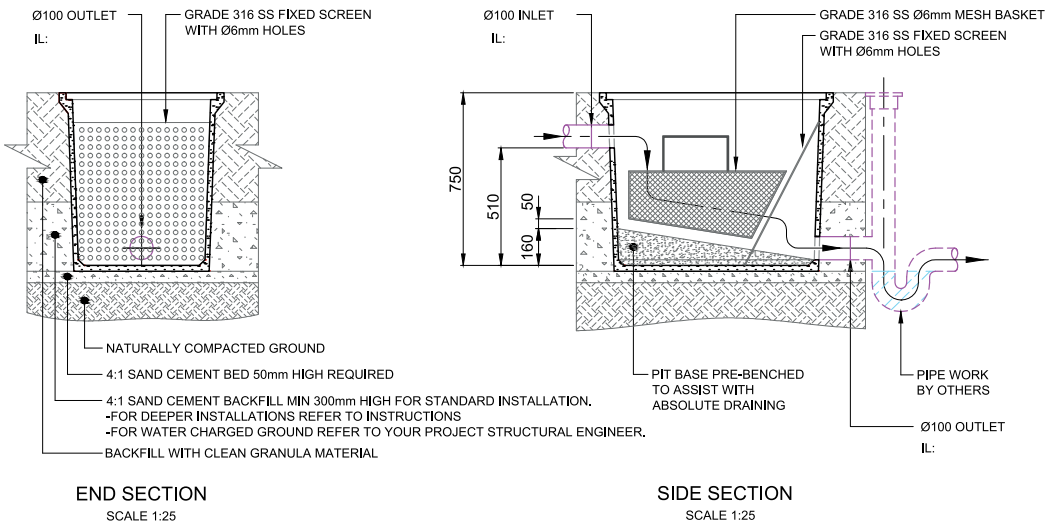


Product Code	A (mm)	B (mm)	Mass (kg)
SBA1S (Side Outlet)	330	320	15
SBA1B (Bottom Outlet)	330	320	15
SBA2S (Side Outlet)	195	170	8
SBA2B (Bottom Outlet)	195	170	8

Notes

1. Internally coated with acid resistant tar epoxy paint.
2. Other PVC pipe sizes and materials available upon request.
3. MPa rating for Mascot GRC – 60MPa @ 28 days.

Dry Arrestors – AD19



Notes

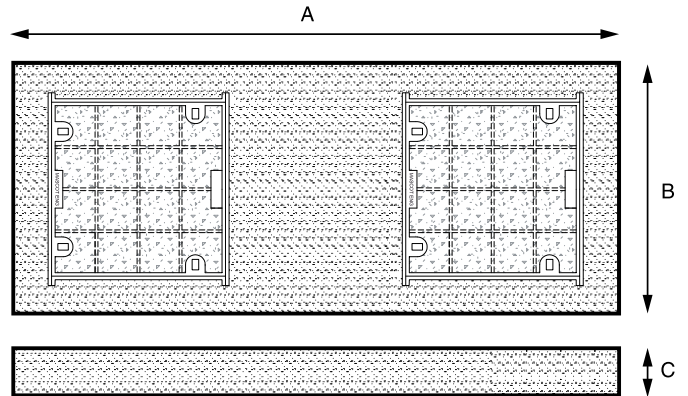
1. Tested and approved for installations up to 5000mm deep.
2. 300mm risers available.
3. Large range of concrete surrounds and covers to suit all load ratings.
4. MPa rating for Mascot GRC: 60MPa @ 28 days.
5. Available extras:
 - a. Step Irons
 - b. Support frame & work platforms for above ground installations
6. Other pipe sizes available.
7. Fitted standard with PVC fittings. Other material (HDPE etc) available.
8. Cover may add to overall depth.
9. Internally coated with acid resistant tar epoxy paint.

Trade Waste Tank Covers

All Mascot Engineering trade waste covers are engineered and manufactured to meet the load ratings specified in AS3996. The covers featured here are water and gastight ensuring unpleasant odours are kept within. These covers are supplied encased in concrete surrounds to ease installation and standard lifting key holes are installed for access with lifting keys (short or long handle).

This cover suits the following:

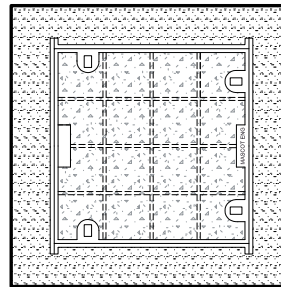
- _____
VIC Grease Interceptors (1100L and above)
- _____
General Purpose Pits
- _____
Petrol and Oli Separators
- _____
Acid Neutraliser Tanks
- _____
Settling Tanks (1100L and above)
- _____
Triple Interceptors



Load Rating	Access Cover Clear Openings (mm)	A (mm)	B (mm)	C (mm)	Mass (kg)
Class B	2 x 600sq	2150	940	150	655
Class D	2 x 600sq	2150	940	200	880

The below cover suits smaller tanks:

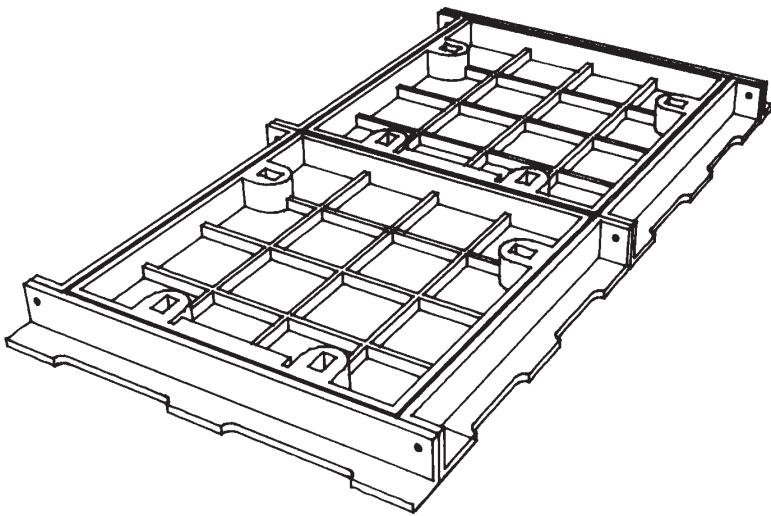
- _____
VIC Grease Interceptors (600L)
- _____
Settling Tanks (600L)
- _____
Straining & Cooling Pits
- _____
Dry Arrestors



Load Rating	Access Cover Clear Openings (mm)	A (mm)	B (mm)	C (mm)	Mass (kg)
Class B	6000x450	1020	720	150/125	93Kg
Class D	600x450	1020	720	150/125	110Kg
Class B	450sq	710	710	150/125	93Kg
Class D	450sq	710	710	150/125	110Kg
Class B	600sq	1020	1020	150/125	333Kg
Class D	600sq	1020	1020	15/125	380Kg
Class B	600sq	1230	1230	200/175	653Kg
Class D	600sq	1230	1230	200/175	680Kg

Two, Three & Multipart Covers & Frames

With 1000s of sizes available, we can manufacture a cover to suit your opening and in all load ratings. Multipart Covers & Frames are available with either a fixed or removable beam (allowing full opening) and are engineered to your project. For a full catalogue, call our sales team, or visit www.mascotengineering.com.au.



Contact



1300 885 295

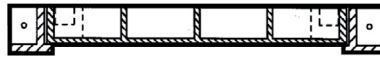
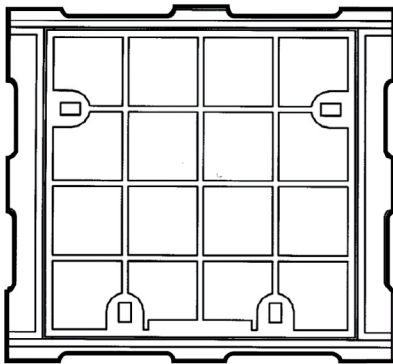
11 Aerolink Drive, Tullamarine VIC 3043
sales@mascoteng.com.au



1300 885 296

www.mascotengineering.com.au

Gas & Watertight Covers & Frames (Class A-G)



Notes

1. All covers and frames manufactured from grade T220 cast iron (minimum) to conform to AS1830.
2. Castings are machined to form a gas and watertight seal.
3. Units are coated in bituminous paint complying with BS3416 type II.
4. All are manufactured in accordance with AS3996.
5. Bolt down and security systems available
6. Two, Three and Multipart Covers are Frames also available.
7. All covers supplied with lifting keyholes and plugs.

Clear Opening	Load Rating	Cover Type	Weight	Product Code
300 x 300	Class B	Iron Watertight/Gastight Cover & Frame	28	MFB33
300 x 300	Class D	Iron Watertight/Gastight Cover & Frame	30	MFD33
300 x 300	Class G	Iron Watertight/Gastight Cover & Frame	76	MFG33
450 x 450	Class B	Iron Watertight/Gastight Cover & Frame	42	MFB44
450 x 450	Class D	Iron Watertight/Gastight Cover & Frame	51	MFD44
450 x 450	Class G	Iron Watertight/Gastight Cover & Frame	105	MFG44
300 x 600	Class D	Iron Watertight/Gastight Cover & Frame	59	MFD36
450 x 600	Class B	Iron Watertight/Gastight Cover & Frame	48	MFB64
450 x 600	Class D	Iron Watertight/Gastight Cover & Frame	65	MFD64
600 x 600	Class B	Iron Watertight/Gastight Cover & Frame	62	MFB66
600 x 600	Class D	Iron Watertight/Gastight Cover & Frame	73	MFD66
600 x 600	Class G	Iron Watertight/Gastight Cover & Frame	150	MFG66
900 x 600	Class B	Iron Watertight/Gastight Cover & Frame	96	MFB96
900 x 600	Class D	Iron Watertight/Gastight Cover & Frame	110	MFD96
900 x 600	Class G	Iron Watertight/Gastight Cover & Frame	220	MFG96
900 x 900	Class B	Iron Watertight/Gastight Cover & Frame	145	MFB99
900 x 900	Class D	Iron Watertight/Gastight Cover & Frame	160	MFD99
900 x 900	Class G	Iron Watertight/Gastight Cover & Frame	305	MFG99
1200 x 1200	Class B	Iron Watertight/Gastight Cover & Frame	230	MFB1212
1200 x 1200	Class D	Iron Watertight/Gastight Cover & Frame	300	MFD1212
1200 x 1300	Class G	Iron Watertight/Gastight Cover & Frame	510	MFG1213

Other load ratings available. Two, Three & Multipart Covers and Frames also available. All Covers can be infilled/encased in concrete surround if required.

Installation instructions

Given the large range of trade waste products, there are various standard installation instructions for our products. All trade waste products are delivered to site with the relevant details attached to the inlet pipe. It's important to note that all information regarding installation is 'typical' and is to be used as a guide only – it does not take into account site specific limitations or requirements. Installers must observe the relevant codes of practice and standards legislated. This product is to be installed by an experienced and licenced plumber and the product should not be put into use until installation is complete (backfilled etc.). Installers should refer to relevant Plumbing and Drainage Regulations, or codes of practice in the area of installation. We recommend contractors contact 'Dial Before You Dig' on 1100 or at www.1100.com.au. Site conditions may require additional reinforcement or a change to these details that may need to be provided by an engineer.

1. Refer to the 'Lifting Instructions' prior to moving the product on site – see below/attached.
2. Prior to installation, determine the exact location of the inlet and outlet.
3. All products are designed to be installed level.
4. If installation is above ground, the product must be complete with a Mascot Engineering manufactured stand (additional cost) and suitably attached to the finished floor (dyna-bolts or similar – supplied by others).
5. The excavation shall be done to the necessary depth (allowing for thickness of cover).
6. If any soft or unsuitable material is found it shall be removed and all the bearing surfaces under the tank shall be compacted and levelled.
7. A layer of compacted granular material shall be installed under the tank to ensure support that will not yield or deflect when the product is in service.
8. The product is to be bedded on a 50mm layer of 4:1 sand/cement with backfill of same to the top of the lower external rib (flat bottom) or to a horizontal level 200mm above the higher point of the sloping base (boat-shaped). Clean, granular backfill to be used to appropriate level and compacted in layers of no more than 300mm and without machine to ground level.
9. All external connections to and from the product are to be completed to the relevant Australian Standard and codes of practice.
10. Extension risers and covers to be sealed with Mascot Engineering Pipe Joining Epoxy or an approved epoxy compound to form a watertight joint.

11. Compaction should not take place without the cover being in place (installed/attached).
12. For deep installations, we recommend the 4:1 sand/cement backfill be increased so that no more than 1800mm below the surface is without the backfill (including cover thickness).
13. Where the water level is greater than 1000mm below the finished surface level a galvanised internal work platform as well as step irons should be fitted.
14. If a solid top pedestrian load cover is being used, ensure transit bolts are removed before fitting.

Installation in Rock

To ensure your product doesn't 'float', if your installation is in rock, we recommend seeking instructions from your site engineer and that you backfill with a 4:1 sand/cement mix from the base up to the top of the rock as well as no less than 1800mm from the finished surface level. For example, if your installation is 3200mm deep, it is recommended that the backfill is to a minimum of the first 1400mm unless the rock is deeper in which case you will continue to the top of the rock. Please refer to your engineer for specific details.

Recommended Inspection / Maintenance Program

Removal and replacement of access covers

All covers are to be removed with Mascot Engineering lifting keys. Covers must be returned to their exact position, first checking that the rebate seat is clean and that a heavy duty grease is applied to all edge surfaces. For more information on direction of covers, refer to our Access Covers installation instructions.

Tank Pump Out

The frequency will be determined by your local trade waste authority and should only be done by a registered waste transporter. The sides of the tank must be cleaned and scraped down using a rubber or plastic edge scraper to remove any build up and not damage the surface coating. A visual inspection of the internal coating should be done and rectified if needed.

Yearly Requirement

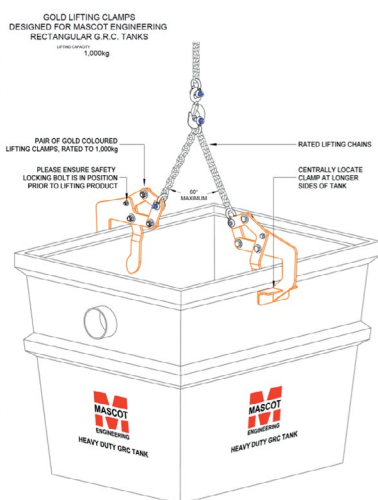
Given the acidic nature of the contents, it is required that the above pump out and cleaning is done annually to ensure the ongoing efficiency of the product. A visual inspection of the internal coating must be completed and rectified if damaged.

Internal Epoxy Coating

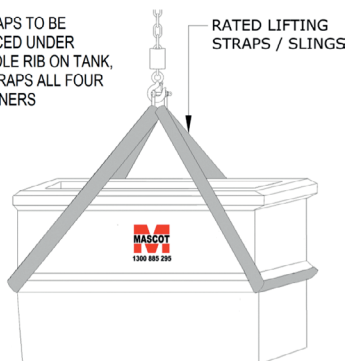
All trade waste products are coated internally with epoxy to protect the product from an acid attack. Given Mascot Engineering's products are manufactured from Glass Reinforced Concrete (GRC), there is no steel present, so the possibility of traditional concrete cancer is removed entirely. If the unit is not maintained and cleaned regularly, it may need re-coating. If re-coating is required, the product must be dry for at least 24 hours, then cleaned. Only Mascot Engineering's tar epoxy based coating should be used and allowed to dry (24 hours) before the unit is used.

Guarantee

If your product fails as a result of poor workmanship within 12 months of purchase, Mascot Engineering will provide a replacement product at no charge.



STRAPS TO BE PLACED UNDER MIDDLE RIB ON TANK, 2 STRAPS ALL FOUR CORNERS



Flat Bottom Tanks

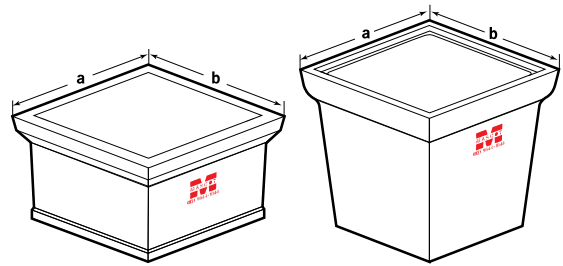
Prior to lifting, please make yourself aware of the local legislation and codes as well as any specific requirements on your site.

**PLEASE LIFT WITH CARE
& BE AWARE OF YOUR
SURROUNDINGS**

PLEASE NOTE: LIFTING INSTRUCTIONS MASCOT GRC FLAT BOTTOM TRADE WASTE TANKS	ENSURE STRAPS ARE LONG ENOUGH TO PREVENT THE RISER BEING CRUSHED (IF APPLICABLE)
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GRC Pits and Risers

Mascot Pits are strong enough for all load ratings. Due to the nature of the material, pipe entries can be done on site in any number of locations and sizes – no need to core-drill and certainly no shattering or patching.

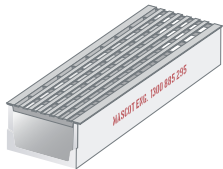
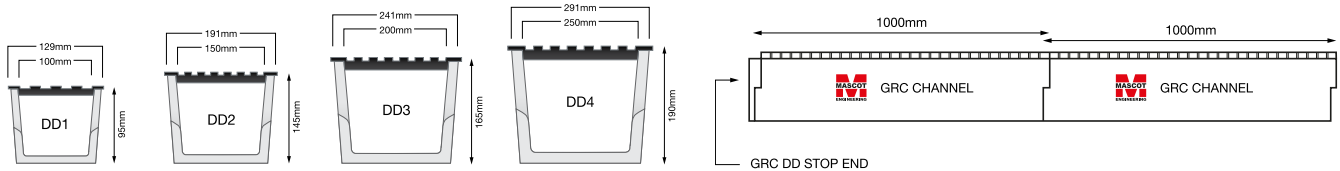


Type	Product Code	Internal Clear Opening Size	Depth	Overall Width (a)	Overall Length (b)	Weight (kg)
Pit	DS030	300 x 300	300	340	340	12
Pit	DS145	375 x 375	460	415	415	20
Riser	DS1R45	375 x 375	450	415	415	19
Pit	DS250	450 x 450	500	550	550	31
Pit	DS280	450 x 450	800	550	550	59
Riser	DS2R30	450 x 450	300	550	550	24
Riser	DS2R60	450 x 450	600	550	550	39
Pit	DS350	600 x 600	500	700	700	58
Pit	DS380	600 x 600	800	700	700	96
Riser	DS3R175	600 x 600	175	700	700	29
Riser	DS3R30	600 x 600	300	700	700	32
Riser	DS3R60	600 x 600	600	700	700	52
Pit	DS460	900 x 600	600	700	1000	76
Pit	DS475	900 x 600	750	700	1000	85
Riser	DS4R30	900 x 600	300	700	1000	31
Riser	DS4R60	900 x 600	600	700	1000	69
Pit	DS560	900 x 900	600	1000	1000	94
Pit	DS575	900 x 900	750	1000	1000	133
Pit	DS599	900 x 900	900	1000	1000	143
Riser	DS5R175	900 x 900	175	1000	1000	38
Riser	DS5R30	900 x 900	300	1000	1000	45
Riser	DS5R60	900 x 900	600	1000	1000	100
Riser	DS5R90	900 x 900	900	1000	1000	137
Pit	DS690	1100 x 1100	900	1200	1200	268
Riser	DS6R30	1100 x 1100	300	1200	1200	96
Riser	DS6R60	1100 x 1100	600	1200	1200	175

DriveDrain Surface Drainage System

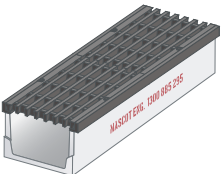
Mascot's Glass Reinforced Concrete (GRC) DriveDrain surface water grated drainage system is cost effective and extremely practical. It is lightweight for handling ease, yet is strong enough to stand up to commercial and industrial applications.

This linear drainage system has been designed with the contractor in mind. Channels can easily be cut on site with a grinder – plus there is no polymer or resin used, so it isn't brittle and won't shatter.



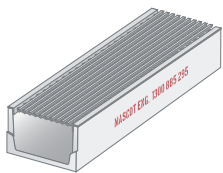
Galvanised Mild Steel Grating

The signature DriveDrain grate is modern and durable. The longitudinal pattern ensure bicycles and wheelchairs are safe and in some sizes are standard heelguard. A cost effective alternative to stainless steel in many situations.



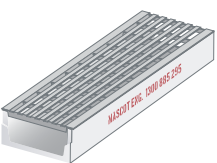
Heavy Duty Ductile Iron Grate and Frame

A longitudinal bolt down ductile iron grate and frame that is bicycle and wheelchair safe – ideal for high traffic areas such as factory units, service stations and industrial/commercial projects.



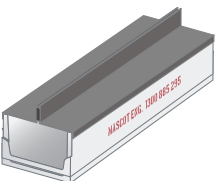
Sleek, Stylish Stainless Steel

For when aesthetics are paramount our sleek and stylish stainless steel heelguard grates are ideal. Available as a drop-in (as shown) or with a frame in both 304 and 316 grade stainless, popular sizes are stocked however most are made to order.



Shallow Drain

The latest edition to the DriveDrain range, the ShallowDrain is ideal for use in suspended slabs or for when depth is an issue. With an overall depth of 70mm, it is available with all grating options including bolt down facility.

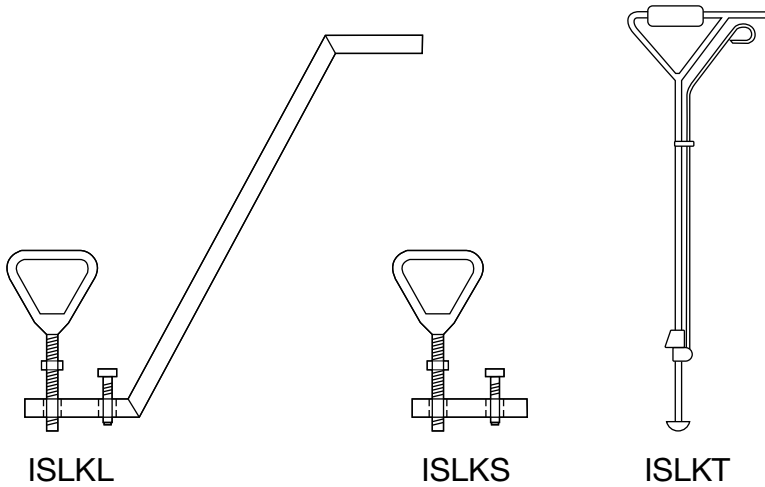


Seamless

A new 12mm slot drain for discreet drainage in paved areas. The sleek channel sits over the DD1 channel in either the centre or to the side allowing for installation against walls.

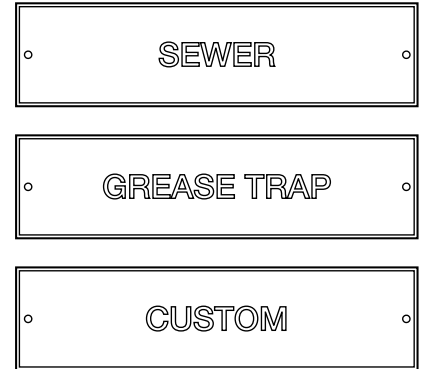
Accessories

Lifting Keys

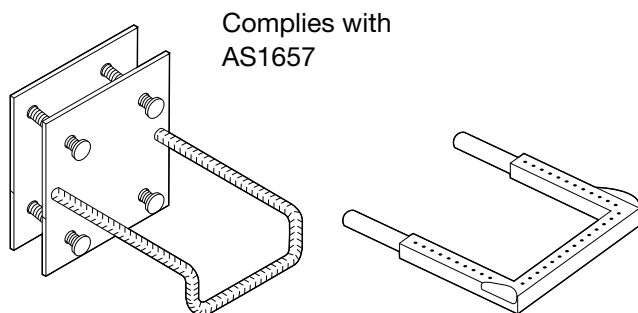


Marker Plates

Available in brass or stainless steel

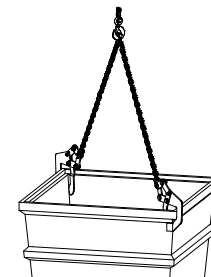


Step Irons



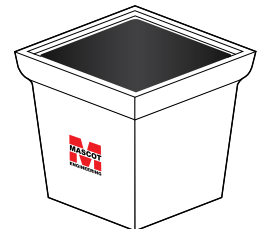
Engineered Pit Lifter

Easily move larger Mascot GRC Pits on site with our unique pit lifters



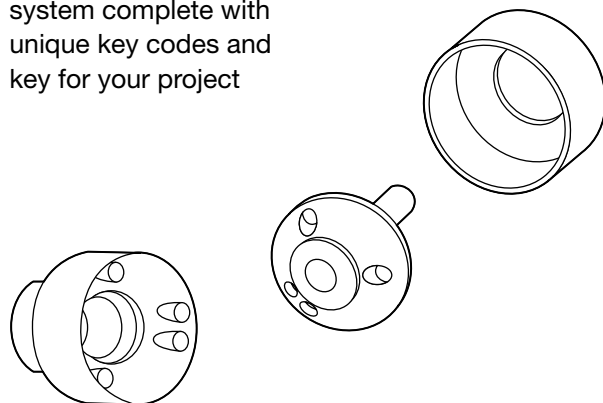
Internal Epoxy Coating

All pits can be coated internally with our tar based epoxy if required



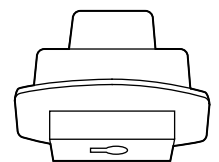
Security Bolts

Patented security barri-bolt system complete with unique key codes and key for your project



Security Key Hole Plugs

Suitable for GMS Covers for additional security and to prevent the ingress of foreign objects



Mascot Two-Part Epoxy

Join your pipes, risers, step irons and covers with Mascot's approved two-part epoxy. Available in a range of sizes.



Special interest projects

Melbourne Airport

Ballarat Airport

Sydney Airport

Perth Airport

Rod Laver Arena

ANZ Stadium

Sydney Exhibition Centre

Royal Exhibition Building Melbourne

International Convention Centre Sydney (ICC)

Sydney Opera House

Barangaroo Development, Sydney

Darling Harbour, Sydney

Woolloomooloo Warf Development

Sydney Powerhouse Museum

Crown St, Surry Hills upgrade

Glebe Point Road, Glebe upgrade

Crown St Mall, Wollongong

Melbourne Metro Rail

Regional Rail Link

M4 Motorway

M7 Motorway

Sydney Harbour Tunnel

Cross City Tunnel

Rio Tinto Tom Price Waste Water Upgrade

Southern Cross Mines, Moranbah Mine QLD

Wonthaggi Desalination Plant

Bathurst Water Filtration Plant

Young Sewerage Treatment Plant

Local councils – Nationwide

Water Authorities – Nationwide

Sydney University

Curtin University

Monash University

Primary & Secondary Schools

Various TAFE colleges

Master Plumber NSW College of Excellence

Westmead Hospital upgrade

Blacktown Hospital upgrade

Australian Nuclear Science & Technology

Organisation (ANSTO)

Melbourne Remand Centre

Royal Randwick Racecourse

Star Car Wash's

Crystal Car Wash's

Little Creatures Brewery – Geelong

Centro Shopping Centres

HomeMaker Centre, Cairns

Bunnings Hardware Stores

Westfield Shopping Centres

Woolworths Stores

Coles Supermarkets

Seven Eleven Stores

BP Service Centres

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KFC Stores

Hungry Jacks Restaurants

Pizza Hut Outlets

Crust Pizza Outlets

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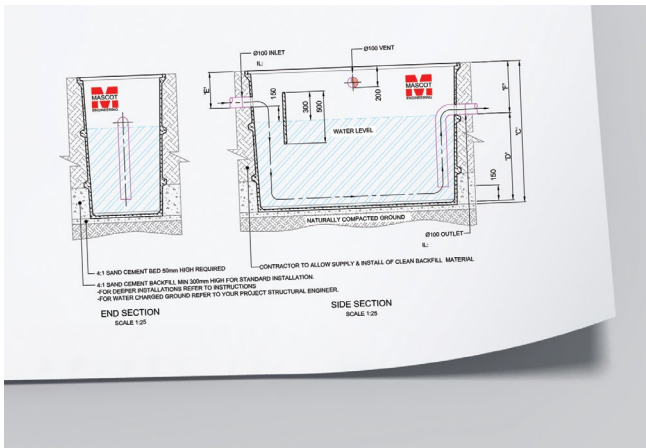
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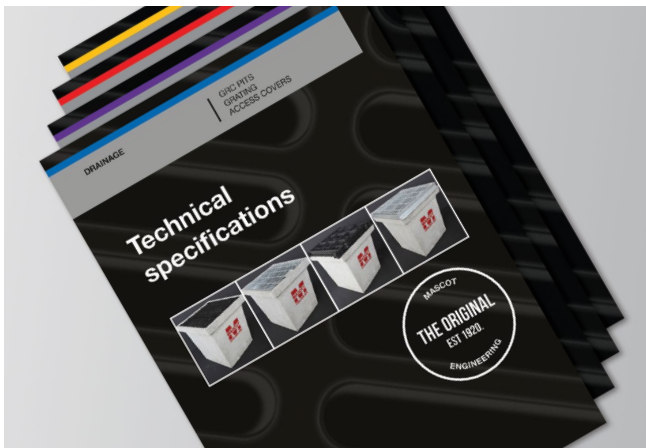
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