

CABLE PITS
AND COVERS

ELECTRICAL AND
COMMUNICATIONS

Technical specifications



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

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About Mascot Engineering

Products you can trust from the proudly Australian-owned family business with over 90 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.

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.

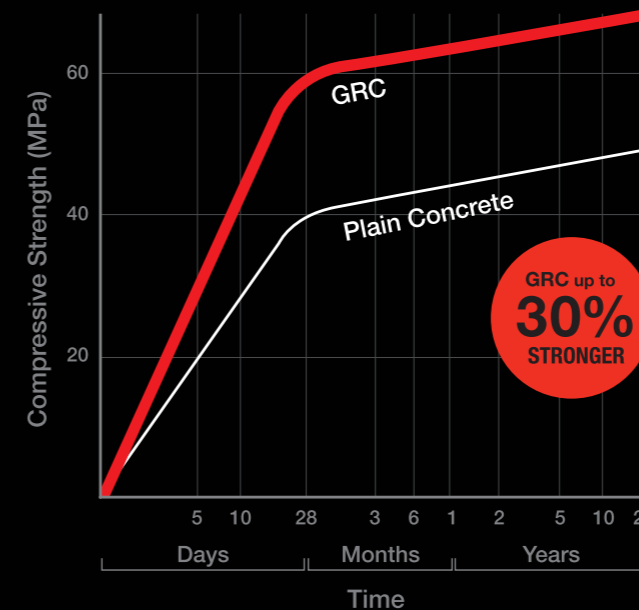
Mascot GRC: Did you know?

- ✓ 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
- ✓ 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

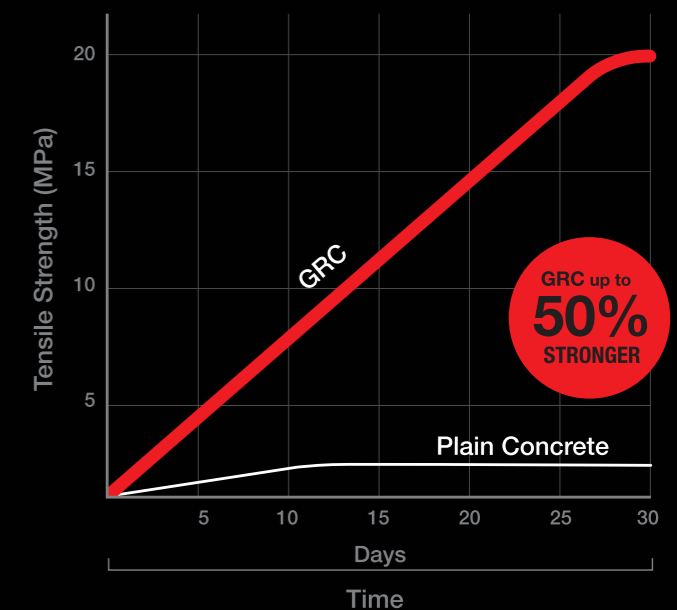
Mascot's alkali resistant glass fibre: cut to size and weighed in each batch to ensure quality



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 28days

- 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, FStructE, MICE, CEng, MIPENZ, NPR-3
RH Consulting Pty Ltd
Specialist Structural, Civil, Façade & Diagnostic Engineer

Properties of Mascot GRC

Mechanical properties	
Compressive strength The enclosure's wall/base is subject to compressive loads in use and needs to withstand specific loads	80MPa typical
Flexural strength Affects site handling and when enclosure is installed in areas where encasement and soils are suspect	24MPa
Tensile strength Generally only relevant to an enclosure's lid/cover	20MPa
Thermal/Electrical properties	
Water absorption The enclosure's wall/base is designed to keep moisture away from its contents where possible	< 5%
Electrical resistivity The electrical insulation capability of an enclosure's materials	$1 \times 10^8 \Omega/\text{sq}$
Freeze thaw Inability to withstand freeze-thaw cycles causes surface spoiling and leads ultimately to an enclosure's failure	Modulus of elasticity unchanged
Coefficient of expansion/contraction Excessive movement between enclosure's wall/base and encasement materials (usually concrete) creates unwanted stresses which may lead to failure	$10 \times 10^{-6} \text{ deg C}$
Water vapour transmission WVT is a measure of water vapour flow through a material. Passage of water vapour may be critical in some instances	$1 \times 10^{-4} \text{ gm/s. Mn}$
Surface properties	
Surface burning 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	Non combustible. Ignitability: P Fire propagation: 0 Flame spread: Class 1 Fire resistance: 1 hour for 10mm thickness
Weathering The majority of cable enclosures are used in exterior applications. Ability to withstand adverse weather will ensure long service life (erosion, UV degradation, etc.)	UV Stable Good as H.S. Concrete
Chemical Resistance Cable enclosures may be subject to acidic or alkaline soils	Excellent. Equivalent to 80MPa concrete

The benefits of Mascot Pits



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 to suit all load ratings, Mascot has the product to suit your project.



Where you want, when you want

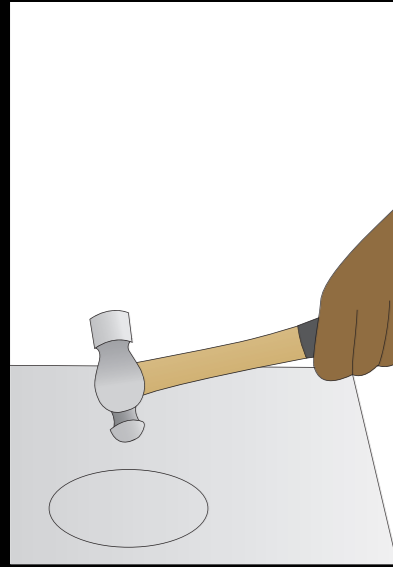
Along with all the necessary approvals, Mascot Engineering has distribution centres throughout Australia – offering you local manufacturer support as well as local deliveries.



The easiest conduit entries in the industry

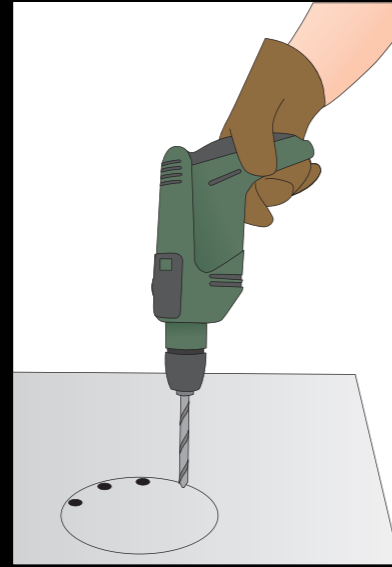
Pipe entries can be made in any location with a ball pein hammer – easy.

Quick knock



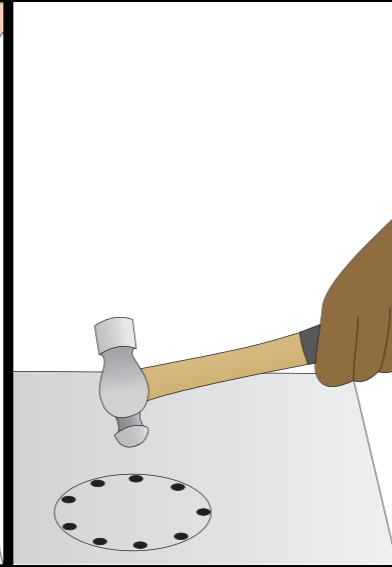
One entry

GR Concrete pits don't have a knockout, leaving you to choose where the entries are to go as well as the size and number of entries on each side. Simply mark out where the entry is to be made and starting in the centre, softly tap the pit with a ball peen hammer.



Multiple and larger entries

Alternatively, for larger entries (150mm), once you've marked out the hole required, use a masonry drill to drill at 50mm centres.



1. Prior to the installation, determine the exact positions of your conduit entries.
2. Holes may be carefully formed using a drill, hammer or grinder with masonry disc.
3. Pits to be installed to levels as shown or directed by the appropriate authority.
4. Excavation for the pit shall be dug to neat lines from naturally compacted ground and to the necessary depth. If any soft or unsuitable material is encountered, it shall be removed and the bearing surface under the pit shall be compacted and levelled to the required dimensions. A layer of compacted granular material shall be provided under the pit to ensure support, which will not yield or deflect when the pit is in service.
5. All connections to pits should be in accordance with the directives of the appropriate authorities and Australian Standard AS2500.
6. Extension riser joints are to be sealed with an approved epoxy cement mortar, to make a strong watertight joint.
7. It is required that you take extra measures to ensure the permanency of your installation in rock. To prevent pits from lifting or 'floating', as a minimum it is necessary to backfill to the top of the rock excavation with a composite of 4:1 sand/cement mix.
8. The pit should be bedded on a minimum 50mm layer of sand-cement mortar – 4 parts sand, one part cement – back filling to the top of the conduit or a minimum of 300mm on all sides with the same cement mortar. Further backfill to the top of the pit with granular material, compacted incrementally.
9. Compaction should not take place without the cover being fixed to the pit. In the absence of a cover, pits may be braced in both directions to prevent deflections during compaction.
10. Mascot GR Concrete pits have a maximum approved depth of 5000mm, however we require you to provide stabilised backfill where the overall pit depth is in excess of 1800mm. In this event, it is required that you backfill the pit with 4:1 sand/cement mix so that the unsupported height of the pit wall is no greater than 1800mm. For example, on a 4000mm deep pit, the minimum backfill height is 2200mm from the external base of the pit.
11. Before attempting any above ground installations or when dealing with water charged ground, please consult your nearest Mascot Sales Office for more details.

Technical tips

Size

Every enclosure is slightly different. Following are some of the key criteria that should be reviewed to choose the best width, length and depth of pit required.

- Purpose of Pit – Direction change, drawing or jointing?
- Cable depth
- Will the pit be used for storage (now or in the future)?
- Will cables need to be segregated?
- Any site limitations or other criteria?

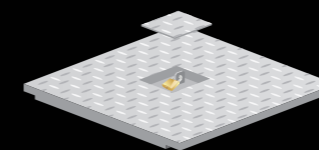


Load Rating & Environment

- Is the cable pit located in a trafficable area? Even if an area isn't designed for vehicular traffic, it's important to bear in mind possible delivery vehicles, etc.
- AS3996 is a standard covering load ratings and is a tool to help you choose the correct cover for your application. For information see page 15.
- What will the finished surface look like and should the cover match? Are aesthetics important?
- Where is the project? How strong is the cable pit for transport; some materials are brittle and not ideal for transport.

Installation

- Compare the installation instructions for various pits bearing in mind the load rating requirements
- Depending on loading and surface finish, some polymer, plastic and other materials require special installation. These requirements can greatly effect costs and time on site and in some cases the pit may simply be expensive formwork.
- Is site access an issue? Product weight may be a concern.



Access – Safety & Security

- Do the contents need to be protected from the ingress of water?
- Do the contents need to be protected from unauthorised entry?
- Does access pose a security risk?

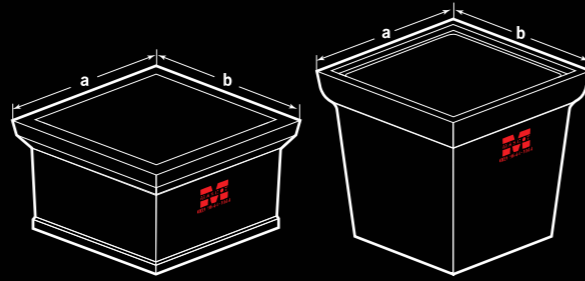
Contact

To discuss your specific requirements call our **Technical Team**

 **1300 885 295**

Pits and Risers overview

Mascot Pits are strong enough for all load ratings and there's no need to concrete encase, saving you time and money. 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	CJP030	300 x 300	300	330	330	12
Pit	CJP145	375 x 375	450	392	392	20
Riser	CJP1R45	375 x 375	450	392	392	19
Pit	CJP250	450 x 450	500	550	550	31
Pit	CJP280	450 x 450	800	550	550	59
Riser	CJP2R30	450 x 450	300	550	550	24
Riser	CJP2R60	450 x 450	600	550	550	39
Pit	CJP350	600 x 600	500	700	700	58
Pit	CJP380	600 x 600	800	700	700	96
Riser	CJP3R175	600 x 600	175	700	700	29
Riser	CJP3R30	600 x 600	300	700	700	32
Riser	CJP3R60	600 x 600	600	700	700	52
Pit	CJP460	900 x 600	600	700	1000	76
Pit	CJP475	900 x 600	750	700	1000	85
Riser	CJP4R30	900 x 600	300	700	1000	31
Riser	CJP4R60	900 x 600	600	700	1000	69
Pit	CJP560	900 x 900	600	1000	1000	94
Pit	CJP575	900 x 900	750	1000	1000	133
Pit	CJP590	900 x 900	900	1000	1000	121
Riser	CJP5R175	900 x 900	175	1000	1000	38
Riser	CJP5R30	900 x 900	300	1000	1000	45
Riser	CJP5R60	900 x 900	600	1000	1000	100
Riser	CJP5R90	900 x 900	900	1000	1000	137
Pit	CJP690	1100 x 1100	900	1200	1200	268
Riser	CJP6R30	1100 x 1100	300	1200	1200	96
Riser	CJP6R60	1100 x 1100	600	1200	1200	175
Pit	CJP750	600 x 300	500	700	400	25
Pit	CJP890	1260 x 455	900	1360	550	124
Riser	CJP8R30	1260 x 455	300	1360	550	78
Pit	CJP970	585 x 245	740	680	340	48

All dimensions in mm and correct at time of print and may vary/change

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.

We have a range of covers to suit all load ratings and applications

1. Glass Reinforced Concrete (GRC) Covers

- ✓ Suitable for pedestrian traffic only
- ✓ Sits flush with the pit surface
- ✓ Non-conductive
- ✓ Allows for full clear opening for maximum access
- ✓ Lifting key holes to Australian Standards – 2 per cover – complete with plugs
- ✓ Electricity and Communications marking available – cast into cover

2-3. Galvanised Mild Steel Checkerplate Covers

- ✓ Available in Class A through to Class D
- ✓ Class A to C sit flush with the pit surface
- ✓ Allows for full clear opening for maximum access
- ✓ Security Bolt Down option
- ✓ High Security Z-Lock (padlock/Military) option
- ✓ Lifting key holes – 2 per cover. Key hole plugs available (IP4X – AS60529)
- ✓ Slip-resistant epoxy coatings available
- ✓ Marker plates (Brass/Stainless) available
- ✓ Manufactured in accordance to AS3678 and AS3679.1 with Grade 250 structural steel. All welding complies with guidelines set out in AS1554.1. All components are hot-dipped galvanised after fabrication in accordance with AS/NZ4680.

4. Cast Iron Paver Infill Cover & Frame

- ✓ Available in Class B and Class D
- ✓ Cover and Frame to be cast into concrete slab above Mascot Pit
- ✓ Allows for full clear opening for maximum access
- ✓ Lifting key holes to Australian Standards – 2 per cover – complete with plugs
- ✓ Manufactured from minimum Grade T220 Cast Iron to conform to AS1830
- ✓ All units are coated in a bitumous paint complying with BS3416 type II or BS4147 as appropriate

5. Cast Iron Solid Top Watertight Covers & Frame

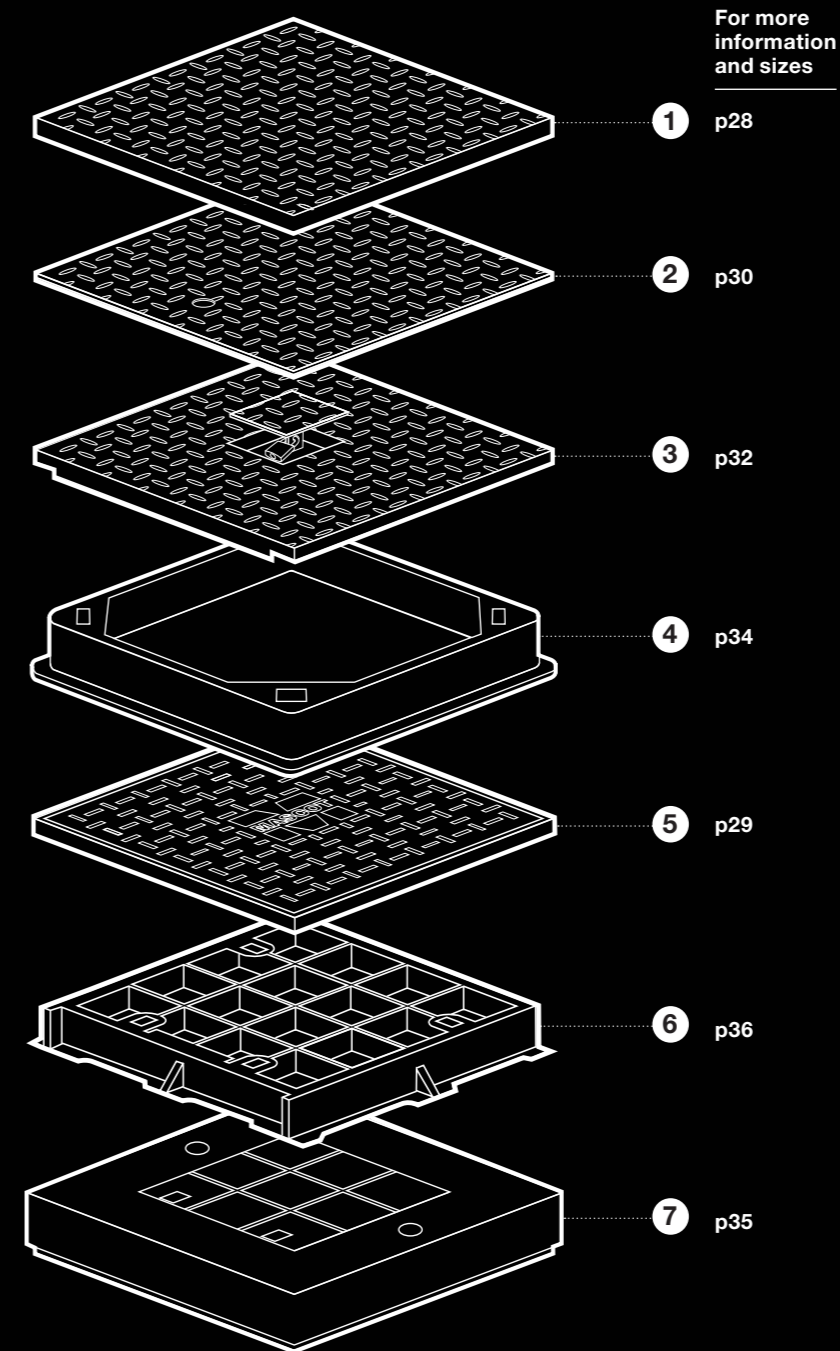
- ✓ Available in Class B & Class C
- ✓ Cover and Frame sits flush with the pit surface
- ✓ Allows for full clear opening for maximum access
- ✓ Covers are bolted down to the frame – security Barri Bolts available
- ✓ Lifting key holes to Australian Standards – 2 per cover – complete with plugs
- ✓ Marker plates (Brass/Stainless) available

6. Cast/Ductile Iron Watertight & Gastight Access Covers and Frames

- ✓ Available in Class A through to Class G
- ✓ Cover and Frame to be cast into concrete slab above Mascot Pit
- ✓ Allows for full clear opening for maximum access
- ✓ Security Bolt Down option
- ✓ Lifting key holes to Australian Standards – 4 per cover – complete with plugs
- ✓ Manufactured from minimum Grade T220 Cast Iron to conform to AS1830
- ✓ All units are coated in a bitumous paint complying with BS3416 type II or BS4147 as appropriate

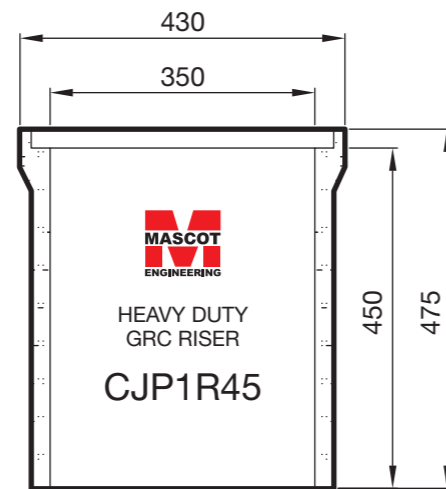
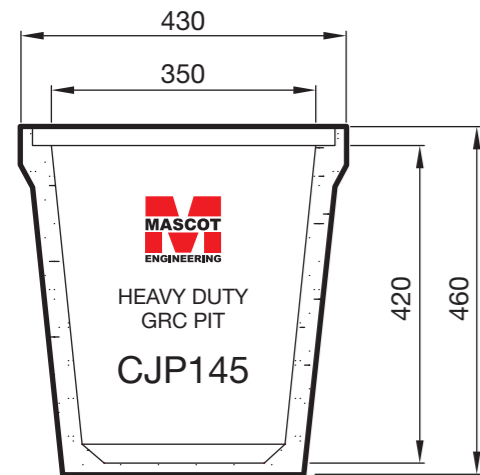
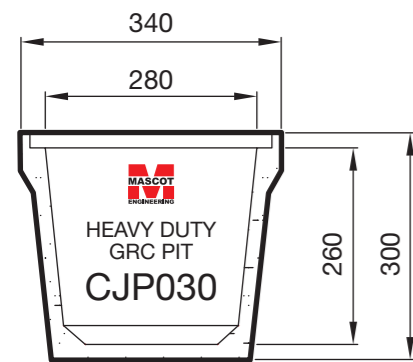
7. Concrete Encased Cast/Ductile Iron Watertight & Gastight Access Covers and Frames

- ✓ Available in Class A through to Class G
- ✓ Designed to suit all Mascot Pits and risers – sitting above the pit with unique Rebate-Lock
- ✓ Security Bolt Down option
- ✓ Lifting key holes to Australian Standards – 4 per cover – complete with plugs
- ✓ Manufactured from minimum Grade T220 Cast Iron to conform to AS1830
- ✓ All units are coated in a bitumous paint complying with BS3416 type II or BS4147 as appropriate
- ✓ All Concrete is a minimum 40MPa and reinforcing complies with AS1302(d)



Pits and Risers: 300mm² & 375mm² (CJP0&1 Ranges)

CJP030 / CJP145 / CJP1R45

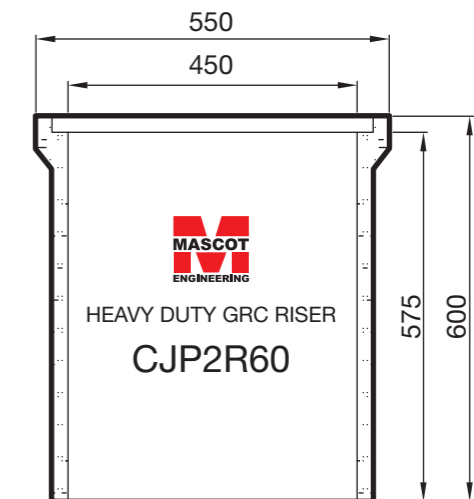
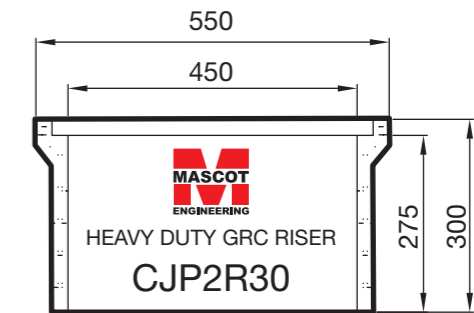
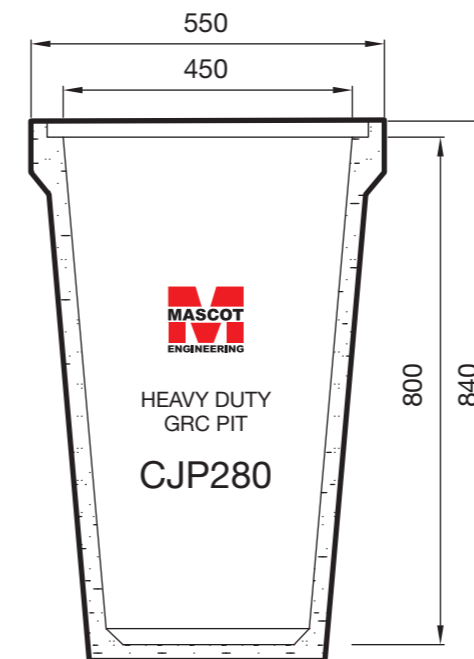
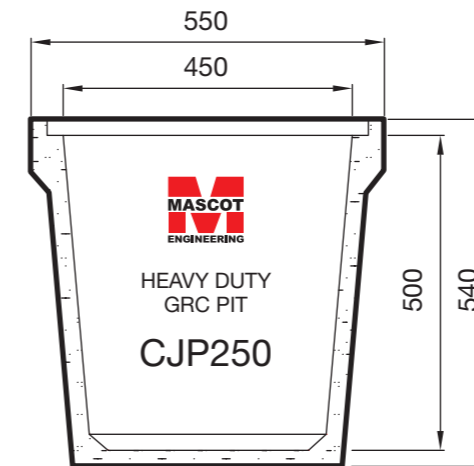


Covers available in all class ratings (AS3996)	Page
GRC Drop-in Covers	28
Solid Top Cover and Frame	29
GMS Checkerplate Cover	30
GMS Checkerplate Boltdown Cover	31
GMS Checkerplate Cover, Z-Lock	32
Cover and Frame in Concrete Surround	35
Gas and Watertight Iron Covers and Frames	36

CAD & PDF drawings available

Pits and Risers: 450mm² (CJP2 Range)

CJP250 / CJP280 / CJP2R30 / CJP2R60

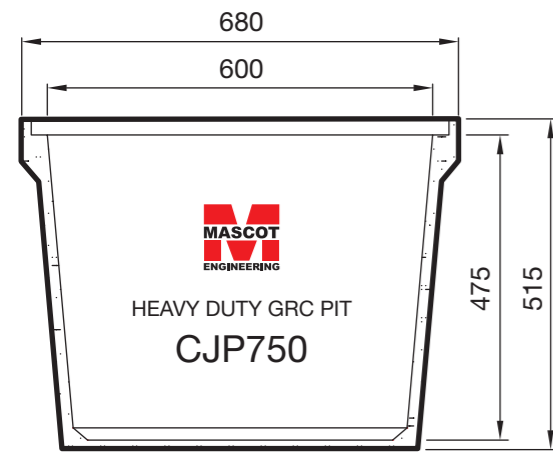


Covers available in all class ratings (AS3996)	Page
GRC Drop-in Covers	28
Solid Top Cover and Frame	29
GMS Checkerplate Cover	30
GMS Checkerplate Boltdown Cover	31
GMS Checkerplate Cover, Z-Lock	32
Cast Iron Paver Infill Covers and Frames	34
Cover and Frame in Concrete Surround	35
Gas and Watertight Iron Covers and Frames	36

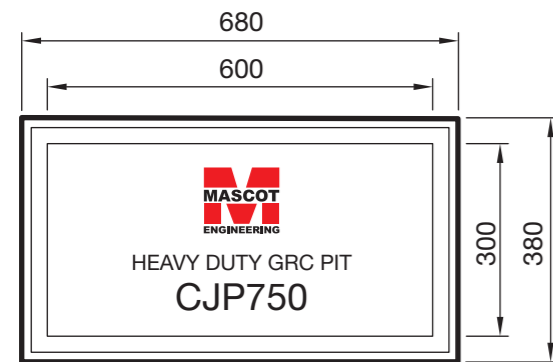
CAD & PDF drawings available

Pits: 600x300mm (CJP7 Range)

CJP750



SECTION VIEW



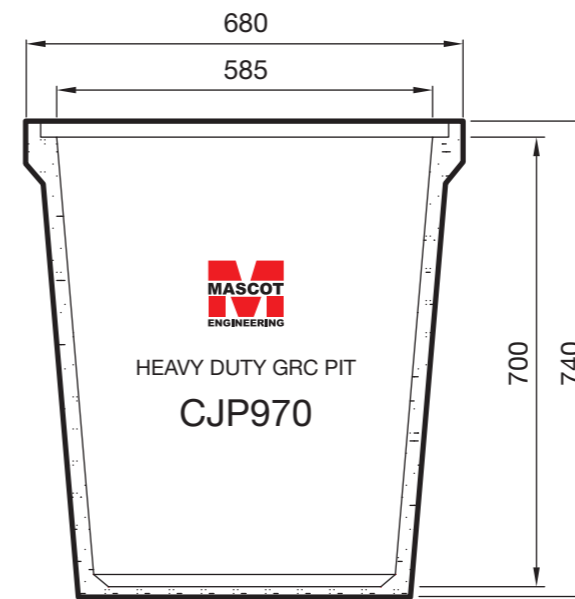
PLAN VIEW

Covers available in all class ratings (AS3996)	Page
GRC Drop-in Covers	28
GMS Checkerplate Cover	30
GMS Checkerplate Boltdown Cover	31
GMS Checkerplate Cover, Z-Lock	32
Gas and Watertight Iron Covers and Frames	36

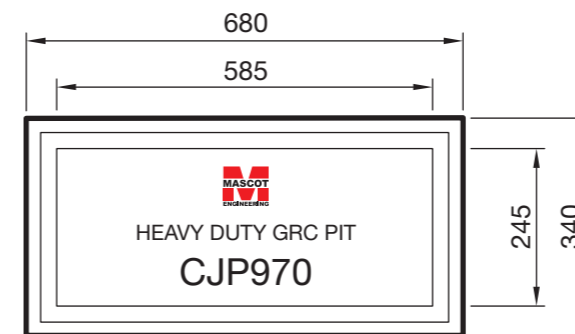
CAD & PDF drawings available

Pits: 600x300mm (CJP9 Range)

CJP970



SECTION VIEW



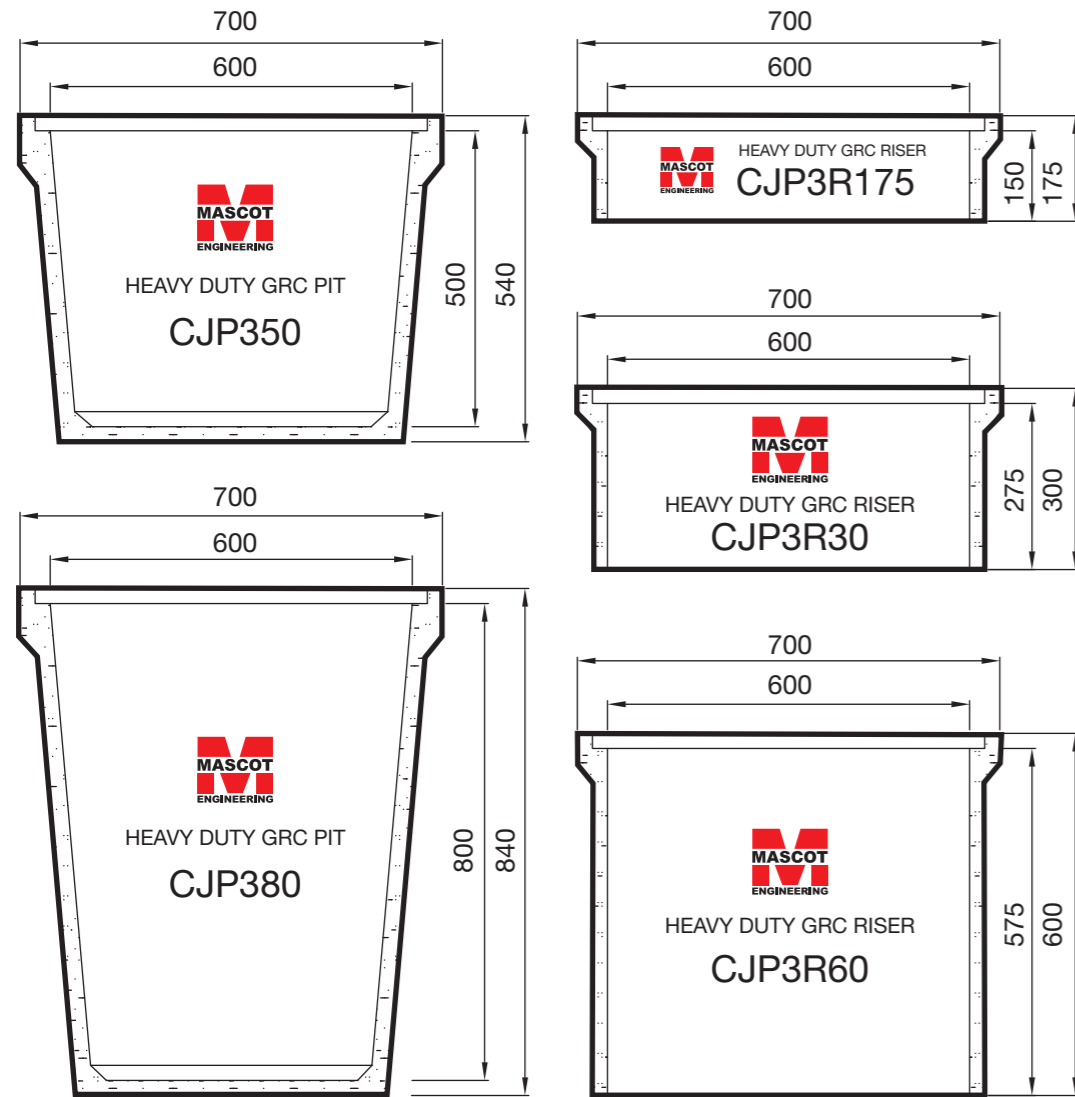
PLAN VIEW

Covers available in all class ratings (AS3996)	Page
GRC Drop-in Covers	28
GMS Checkerplate Cover	30
GMS Checkerplate Boltdown Cover	31
GMS Checkerplate Cover, Z-Lock	32
Gas and Watertight Iron Covers and Frames	36

CAD & PDF drawings available

Pits and Risers: 600mm² (CJP3 Range)

CJP350 / CJP380 / CJP3R175 / CJP3R30 / CJP3R60

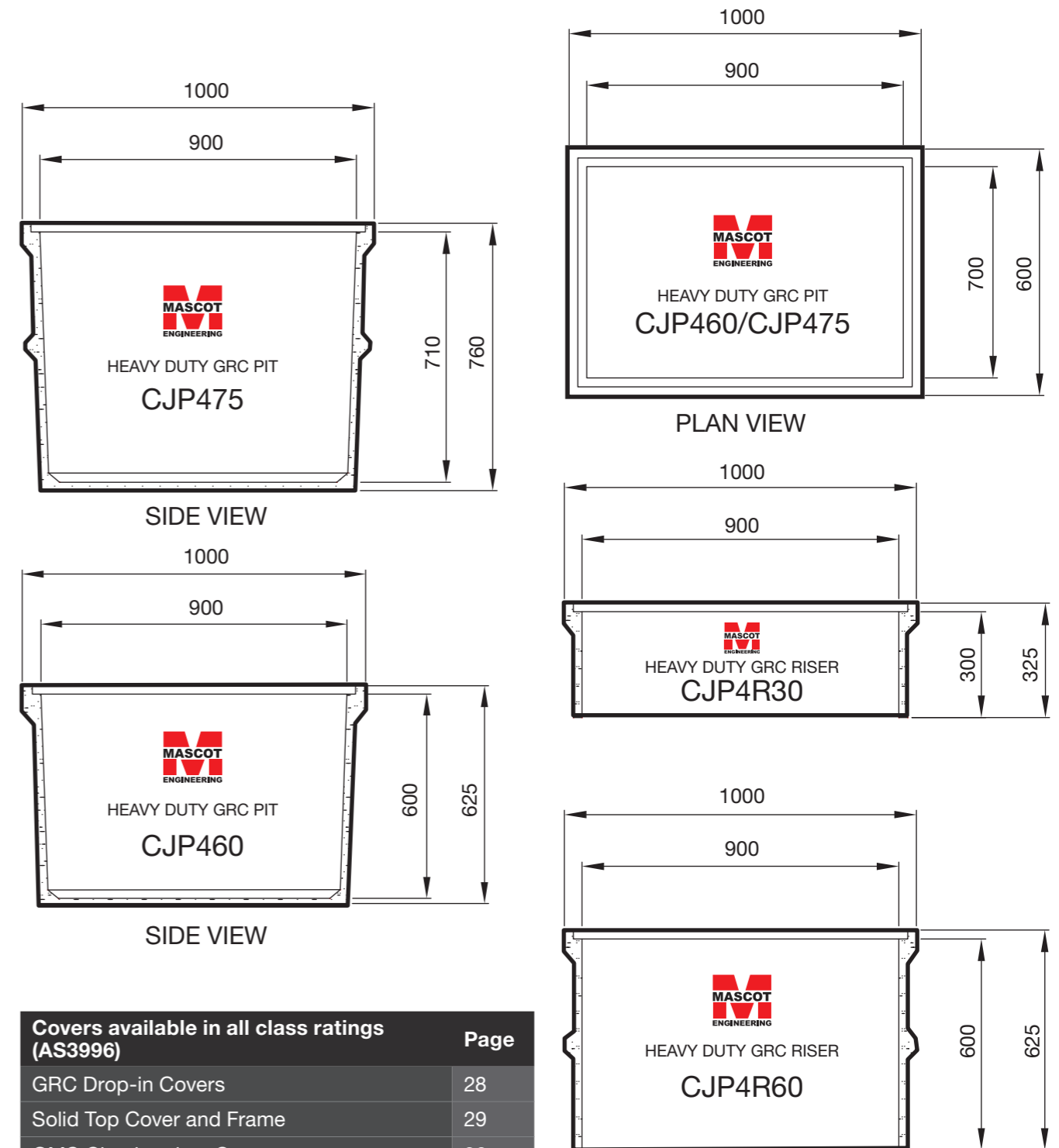


Covers available in all class ratings (AS3996)	Page
GRC Drop-in Covers	28
GMS Checkerplate Cover	30
GMS Checkerplate Boltdown Cover	31
GMS Checkerplate Cover, Z-Lock	32
Cast Iron Paver Infill Covers and Frames	34
Cover and Frame in Concrete Surround	35
Gas and Watertight Iron Covers and Frames	36

CAD & PDF drawings available

Pits and Risers: 600x900mm (CJP4 Range)

CJP475 / CJP460 / CJP4R30 / CJP4R60

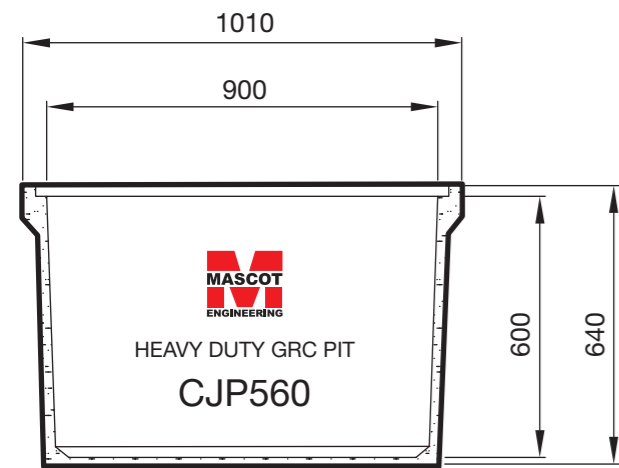


Covers available in all class ratings (AS3996)	Page
GRC Drop-in Covers	28
Solid Top Cover and Frame	29
GMS Checkerplate Cover	30
GMS Checkerplate Boltdown Cover	31
GMS Checkerplate Cover, Z-Lock	32
Cover and Frame in Concrete Surround	35
Gas and Watertight Iron Covers and Frames	36

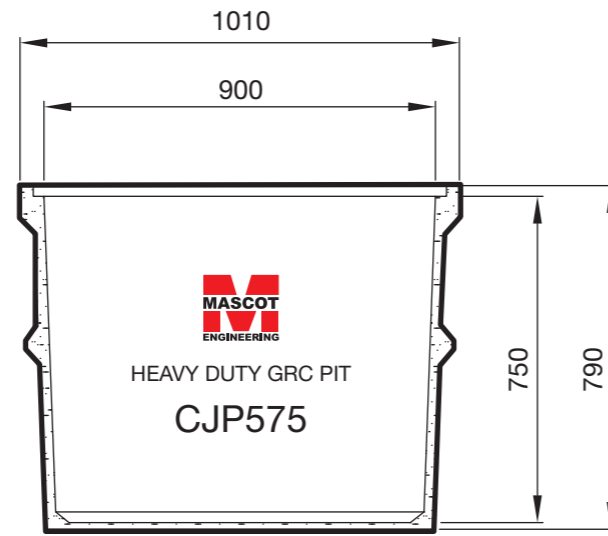
CAD & PDF drawings available

Pits: 900mm² (CJP5 Range)

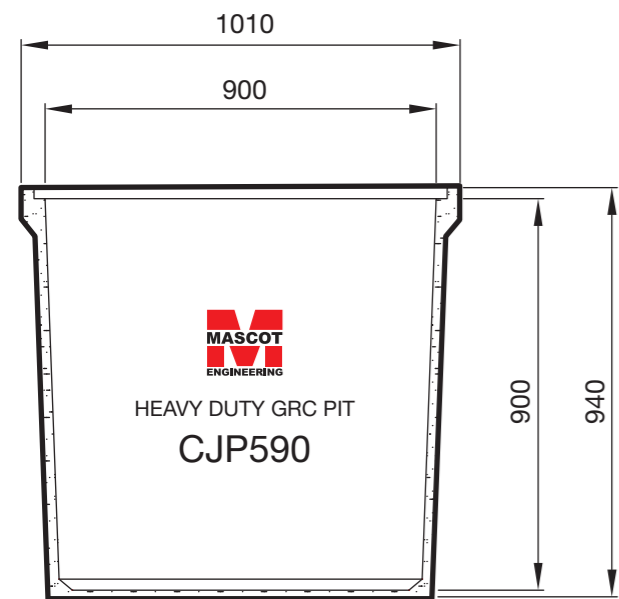
CJP560 / CJP575 / CJP590



SECTION VIEW

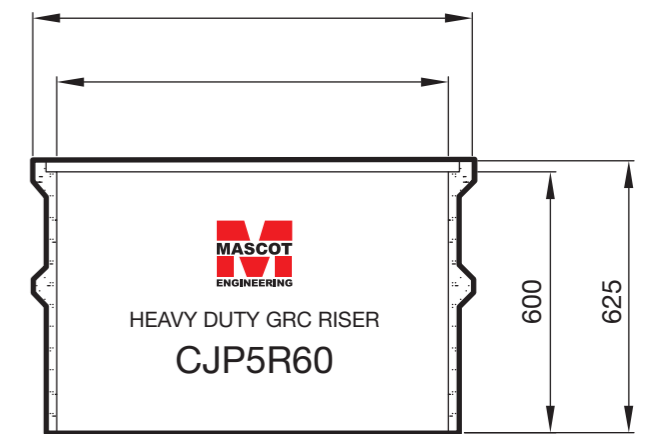
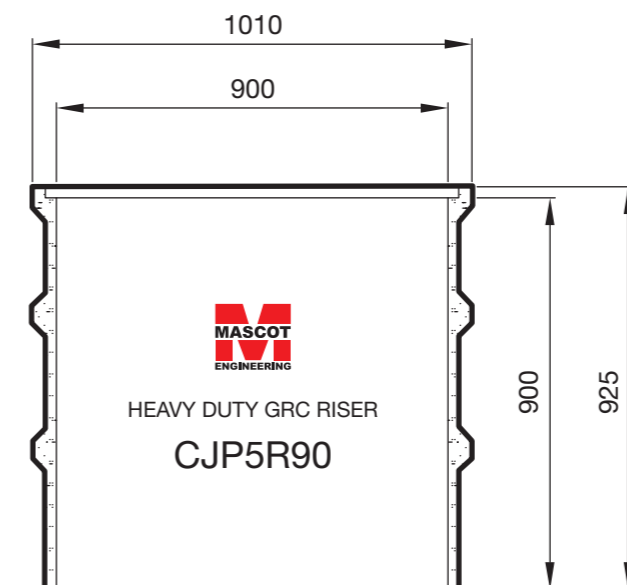
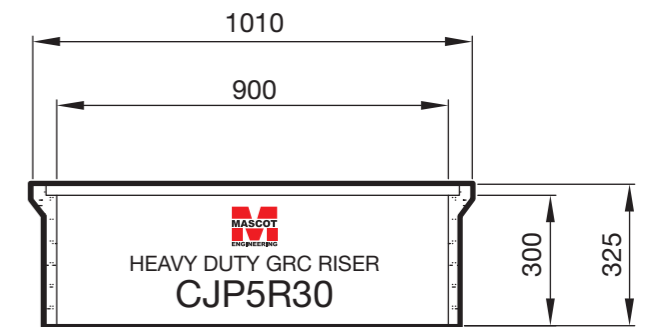
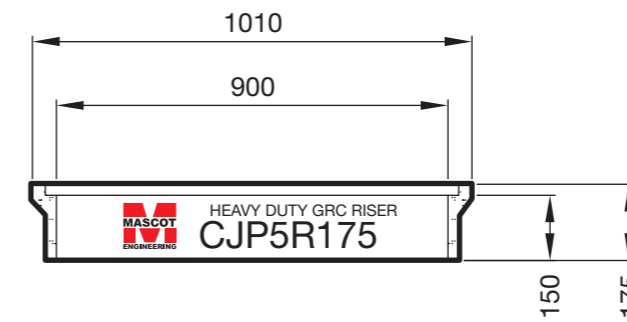


SECTION VIEW



SECTION VIEW

CJP5R175 / CJP5R30 / CJP5R60 / CJP5R90

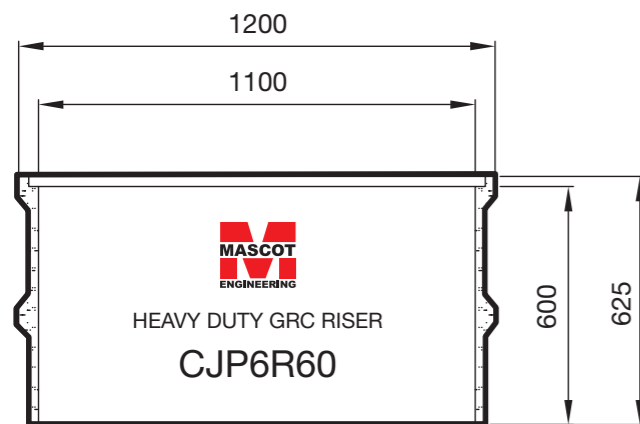
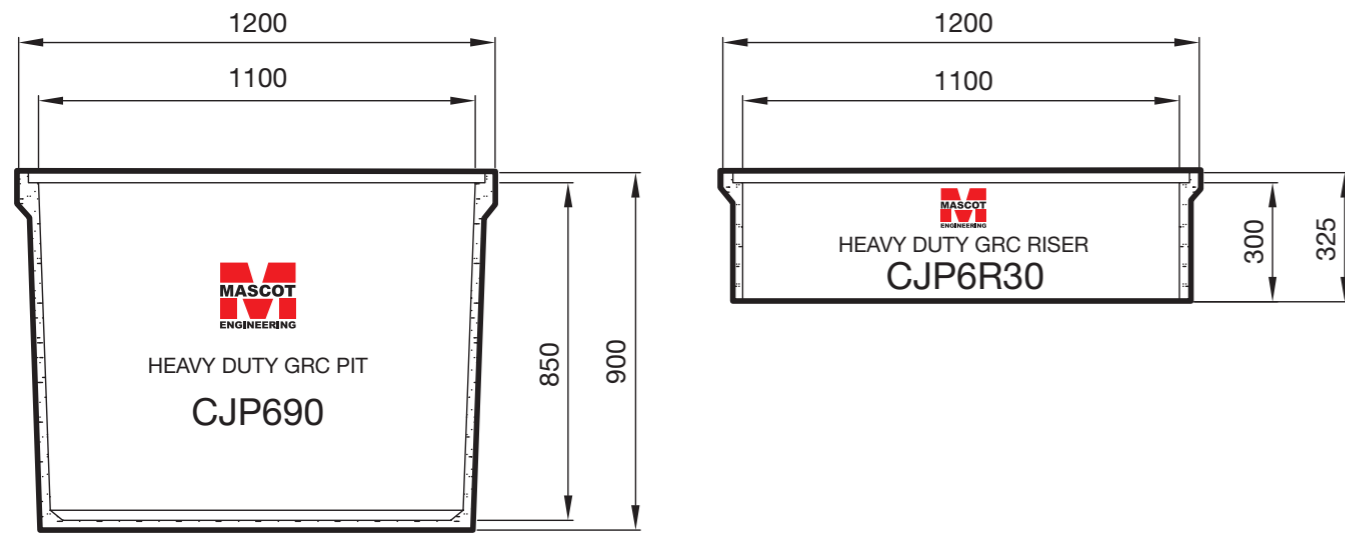


Covers available in all class ratings (AS3996)	Page
Solid Top Cover and Frame	29
GMS Checkerplate Cover	30
GMS Checkerplate Boltdown Cover	31
GMS Checkerplate Cover, Z-Lock	32
Cast Iron Paver Infill Covers and Frames	34
Cover and Frame in Concrete Surround	35
Gas and Watertight Iron Covers and Frames	36

CAD & PDF drawings available

Pits and Risers: 1200mm² (CJP6 Range)

CJP690 / CJP6R30 / CJP6R60

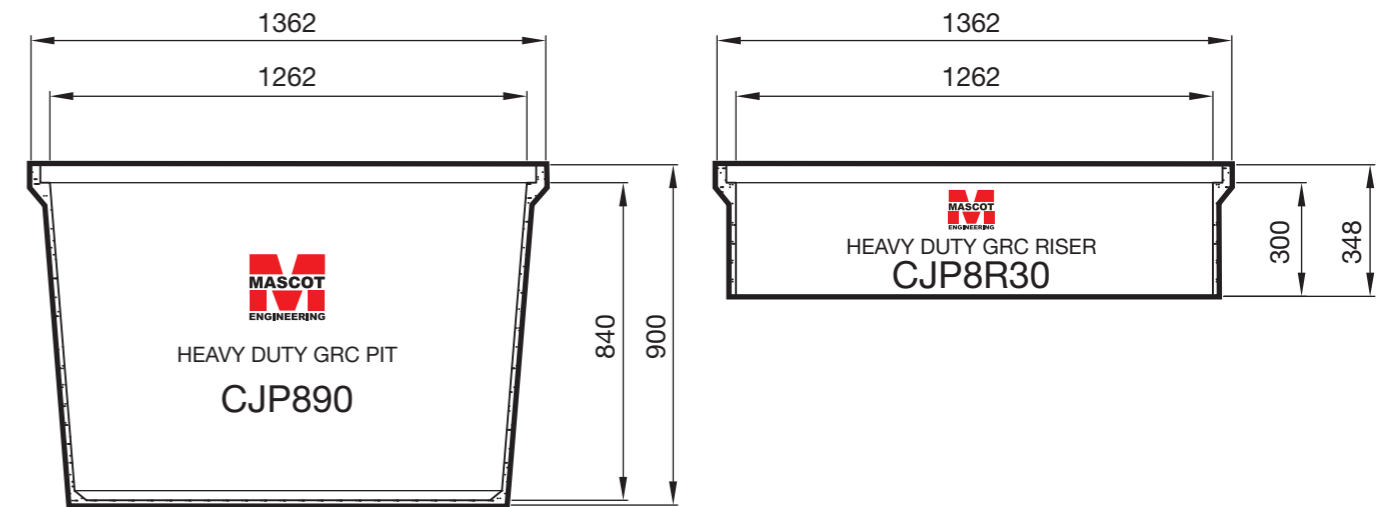


Covers available in all class ratings (AS3996)	Page
Solid Top Cover and Frame	29
GMS Checkerplate Cover	30
GMS Checkerplate Bolt-down Cover	31
GMS Checkerplate Cover, Z-Lock	32
Cover and Frame in Concrete Surround	35
Gas and Watertight Iron Covers and Frames	36

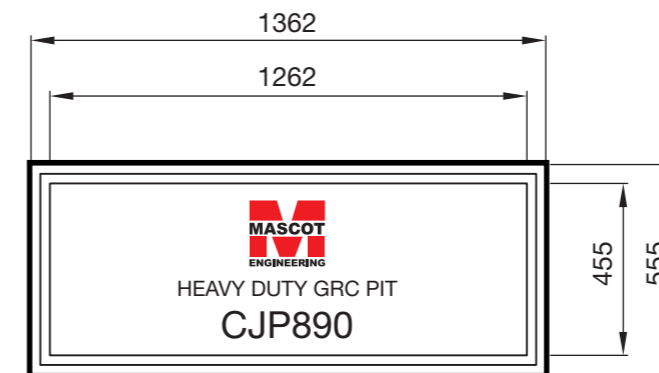
CAD & PDF drawings available

Pits and Risers: 1260x455mm (Type 8 Pit)

CJP890 / CJP8R30



SECTION VIEW

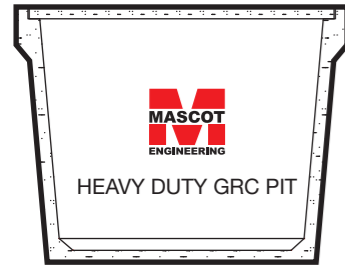


PLAN VIEW

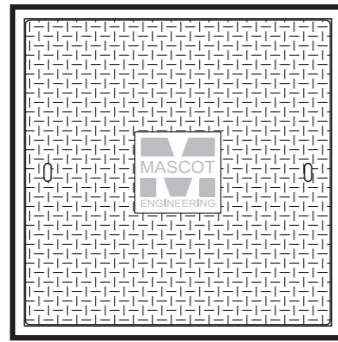
Covers available in all class ratings (AS3996)	Page
Steel Checkerplate GMS Class A to Class C	30
GMS Checkerplate Bolt-down Cover	31
GMS Checkerplate Cover, Z-Lock	32
Gas and Watertight Iron Covers and Frames	36

CAD & PDF drawings available

GRC Cover (Pedestrian)



SECTION VIEW



PLAN VIEW

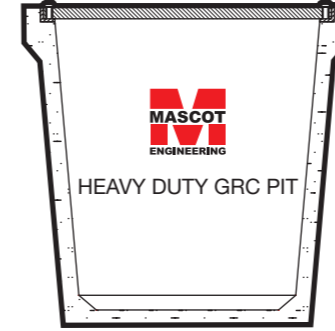
Notes

1. Covers are non-corrosive and non-conductive
2. Covers are complete with two lifting keyholes and plugs
3. Covers finish flush with the top of the Mascot GRC Pit

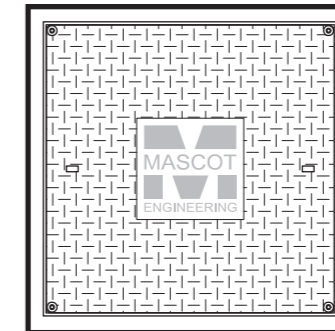
Suit Pit Range	Clear Opening	Load Rating	Markings	Weight	Product Code
CJP0	300 x 300	Pedestrian	Blank	5kg	CJP0PC
CJP1	375 x 375	Pedestrian	Blank	7kg	CJP1PC
CJP2	450 x 450	Pedestrian	Blank	12kg	CJP2PC
CJP2	450 x 450	Pedestrian	Electricity	12kg	CJP2EC
CJP2	450 x 450	Pedestrian	Communications	12kg	CJP2CC
CJP3	600 x 600	Pedestrian	Blank	20kg	CJP3PC
CJP3	600 x 600	Pedestrian	Electricity	20kg	CJP3EC
CJP3	600 x 600	Pedestrian	Communications	20kg	CJP3CC
CJP4	900 x 600	Pedestrian	Blank	30kg	CJP4PC
CJP4	900 x 600	Pedestrian	Electricity	30kg	CJP4EC
CJP4	900 x 600	Pedestrian	Communications	30kg	CJP4CC
CJP7	600 x 300	Pedestrian	Blank	14kg	CJP7PC
CJP7	600 x 300	Pedestrian	Electricity	14kg	CJP7EC
CJP7	600 x 300	Pedestrian	Communications	14kg	CJP7CC
CJP9	585 x 245	Pedestrian	Blank	14kg	CJP9PC
CJP9	585 x 245	Pedestrian	Electricity	14kg	CJP9EC
CJP9	585 x 245	Pedestrian	Communications	14kg	CJP9CC

CJP4 are two part covers complete with GMS tee-support

Solid Top Cover and Frame (Class B-C)



SECTION VIEW



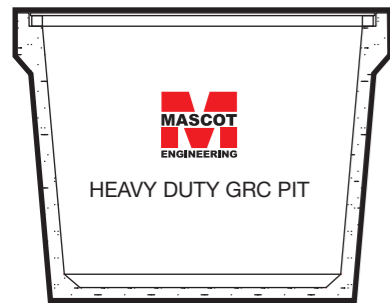
PLAN VIEW

Notes

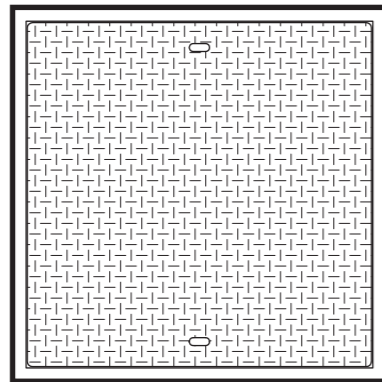
1. Covers with Frame are Bolt-down – Security Bolts available
2. Covers are complete with two lifting keyholes and plugs
3. Covers finish flush with the top of the Mascot GRC Pit
4. Frames to be sealed to pit rebate with approved two-part epoxy

Suit Pit Range	Clear Opening	Load Rating	Cover Type	Weight	Product Code
CJP0	300 x 300	Class C	Solid Top Cover	6kg	CJP0STC
CJP1	375 x 375	Class C	Solid Top Cover	9kg	CJP1STC
CJP2	450 x 450	Class C	Solid Top Watertight Cover & Frame	18kg	CJP2STC
CJP3	600 x 600	Class C	Solid Top Watertight Cover & Frame	30kg	CJP3STC
CJP4	900 x 600	Class C	Solid Top Watertight Cover & Frame	50kg	CJP4STC
CJP5	900 x 900	Class C	Solid Top Watertight Cover & Frame	71kg	CJP5STC
CJP6	1100 x 1100	Class B	Solid Top Watertight Cover & Frame	108kg	CJP6STC
CJP7	600 x 300	Class C	Solid Top Watertight Cover & Frame	18kg	CJP7STC

GMS Checkerplate Cover (Class A-D)



SECTION VIEW



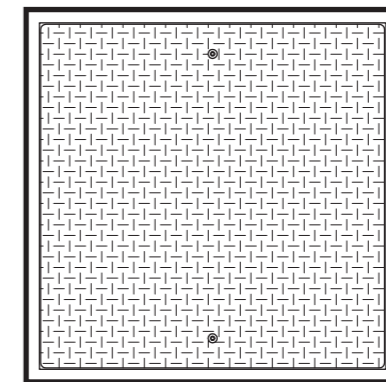
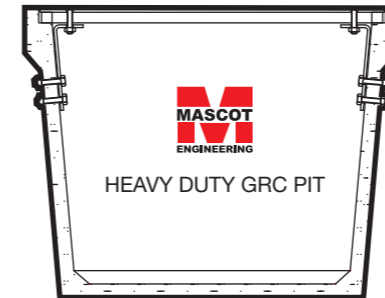
PLAN VIEW

Notes

1. Steel checkerplate covers are manufactured in accordance to AS3678 & AS3679.1 with Grade 250 structural steel
2. All welding complies with all guidelines as set out in AS1554
3. All components are hot dipped galvanised after fabrication in accordance to AS1650, AS/NZS 4680:2006
4. Covers are lifted using standard Telstra lifting keys
5. Class A, B & C covers finish flush with the top of the Mascot GRC Pit
6. Brass and Stainless Steel marker plates available
7. For details on Class D covers, please contact the technical team.
8. Security keyhole plugs available

Suit Pit Range	Clear Opening	Load Rating	Cover Type	Weight	Product Code
CJP0	300 x 300	Class A	Steel GMS	4kg	CJP0GMSCA
CJP0	300 x 300	Class B	Steel GMS	5kg	CJP0GMSCB
CJP0	300 x 300	Class C	Steel GMS	7kg	CJP0GMSCC
CJP1	375 x 375	Class A	Steel GMS	5kg	CJP1GMSCA
CJP1	375 x 375	Class B	Steel GMS	6kg	CJP1GMSCB
CJP1	375 x 375	Class C	Steel GMS	8kg	CJP1GMSCC
CJP2	450 x 450	Class A	Steel GMS	8kg	CJP2GMSCA
CJP2	450 x 450	Class B	Steel GMS	10kg	CJP2GMSCB
CJP2	450 x 450	Class C	Steel GMS	12kg	CJP2GMSCC
CJP3	600 x 600	Class A	Steel GMS	17kg	CJP3GMSCA
CJP3	600 x 600	Class B	Steel GMS	19kg	CJP3GMSCB
CJP3	600 x 600	Class C	Steel GMS	23kg	CJP3GMSCC
CJP4	900 x 600	Class A	Steel GMS	30kg	CJP4GMSCA
CJP4	900 x 600	Class B	Steel GMS	38kg	CJP4GMSCB
CJP4	900 x 600	Class C	Steel GMS	48kg	CJP4GMSCC
CJP5	900 x 900	Class A	Steel GMS	40kg	CJP5GMSCA
CJP5	900 x 900	Class B	Steel GMS	45kg	CJP5GMSCB
CJP5	900 x 900	Class C	Steel GMS	50kg	CJP5GMSCC
CJP6	1100 x 1100	Class A	Steel GMS	70kg	CJP6GMSCA
CJP6	1100 x 1100	Class B	Steel GMS	80kg	CJP6GMSCB
CJP6	1100 x 1100	Class C	Steel GMS	86kg	CJP6GMSCC
CJP7	600 x 300	Class A	Steel GMS	8kg	CJP7GMSCA
CJP7	600 x 300	Class B	Steel GMS	10kg	CJP7GMSCB
CJP7	600 x 300	Class C	Steel GMS	13kg	CJP7GMSCC
CJP8	1250 x 450	Class A	Steel GMS	26kg	CJP8GMSCA
CJP8	1250 x 450	Class B	Steel GMS	30kg	CJP8GMSCB
CJP8	1250 x 450	Class C	Steel GMS	40kg	CJP8GMSCC
CJP9	585 x 245	Class A	Steel GMS	8kg	CJP9GMSCA
CJP9	585 x 245	Class B	Steel GMS	10kg	CJP9GMSCB
CJP9	585 x 245	Class C	Steel GMS	13kg	CJP9GMSCC

GMS Checkerplate Bolt-down Cover (Class A-C)

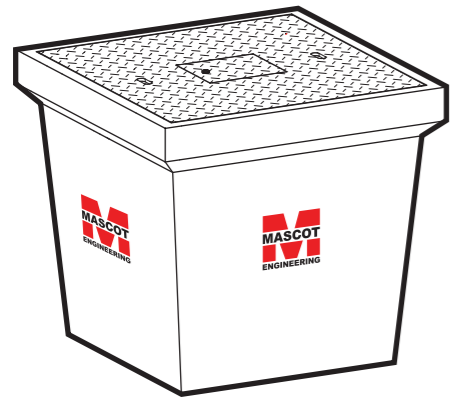


Notes

1. Steel checkerplate covers are manufactured in accordance to AS3678 & AS3679.1 with Grade 250 structural steel
2. All welding complies with all guidelines as set out in AS1554
3. All components are hot dipped galvanised after fabrication in accordance to AS1650, AS/NZS 4680:2006
4. Covers are lifted using standard Telstra lifting keys
5. Class A, B & C covers finish flush with the top of the Mascot GRC Pit
6. Brass and Stainless Steel marker plates available
7. For details on Class D covers, please contact the technical team.
8. Security keyhole plugs available

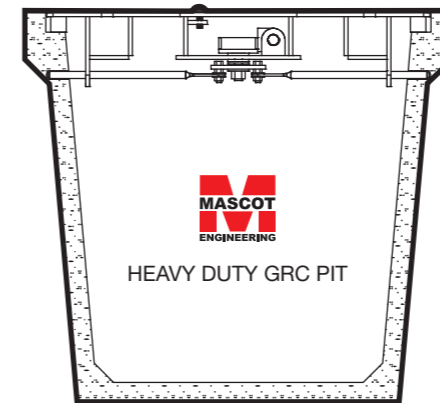
Suit Pit Range	Clear Opening	Load Rating	Cover Type	Weight	Product Code
CJP0	300 x 300	Class A	Steel GMS Lockable	4kg	CJP0GMSCBDA
CJP0	300 x 300	Class B	Steel GMS Lockable	5kg	CJP0GMSCBDB
CJP0	300 x 300	Class C	Steel GMS Lockable	7kg	CJP0GMSCBDC
CJP1	375 x 375	Class A	Steel GMS Lockable	5kg	CJP1GMSCBDA
CJP1	375 x 375	Class B	Steel GMS Lockable	6kg	CJP1GMSCBDB
CJP1	375 x 375	Class C	Steel GMS Lockable	8kg	CJP1GMSCBDC
CJP2	450 x 450	Class A	Steel GMS Lockable	8kg	CJP2GMSCBDA
CJP2	450 x 450	Class B	Steel GMS Lockable	10kg	CJP2GMSCBDB
CJP2	450 x 450	Class C	Steel GMS Lockable	12kg	CJP2GMSCBDC
CJP3	600 x 600	Class A	Steel GMS Lockable	17kg	CJP3GMSCBDA
CJP3	600 x 600	Class B	Steel GMS Lockable	19kg	CJP3GMSCBDB
CJP3	600 x 600	Class C	Steel GMS Lockable	23kg	CJP3GMSCBDC
CJP4	900 x 600	Class A	Steel GMS Lockable	30kg	CJP4GMSCBDA
CJP4	900 x 600	Class B	Steel GMS Lockable	38kg	CJP4GMSCBDB
CJP4	900 x 600	Class C	Steel GMS Lockable	48kg	CJP4GMSCBDC
CJP5	900 x 900	Class A	Steel GMS Lockable	40kg	CJP5GMSCBDA
CJP5	900 x 900	Class B	Steel GMS Lockable	45kg	CJP5GMSCBDB
CJP5	900 x 900	Class C	Steel GMS Lockable	50kg	CJP5GMSCBDC
CJP6	1100 x 1100	Class A	Steel GMS Lockable	70kg	CJP6GMSCBDA
CJP6	1100 x 1100	Class B	Steel GMS Lockable	80kg	CJP6GMSCBDB
CJP6	1100 x 1100	Class C	Steel GMS Lockable	86kg	CJP6GMSCBDC
CJP7	600 x 300	Class A	Steel GMS Lockable	8kg	CJP7GMSCBDA
CJP7	600 x 300	Class B	Steel GMS Lockable	10kg	CJP7GMSCBDB
CJP7	600 x 300	Class C	Steel GMS Lockable	13kg	CJP7GMSCBDC
CJP8	1250 x 450	Class A	Steel GMS Lockable	26kg	CJP8GMSCBDA
CJP8	1250 x 450	Class B	Steel GMS Lockable	30kg	CJP8GMSCBDB
CJP8	1250 x 450	Class C	Steel GMS Lockable	40kg	CJP8GMSCBDC
CJP9	585 x 245	Class A	Steel GMS Lockable	8kg	CJP9GMSCBDA
CJP9	585 x 245	Class B	Steel GMS Lockable	10kg	CJP9GMSCBDB
CJP9	585 x 245	Class C	Steel GMS Lockable	13kg	CJP9GMSCBDC

GMS Checkerplate Steel Cover, Z-Lock (Class A-D)

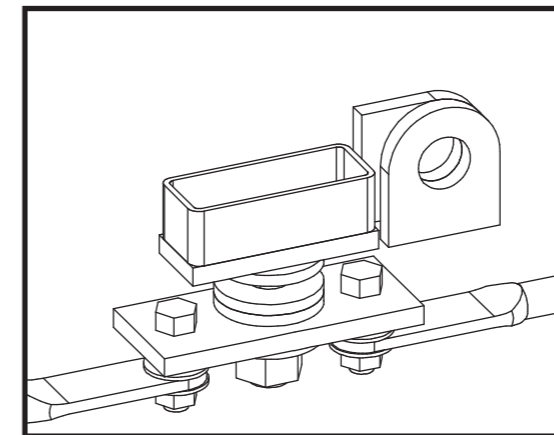


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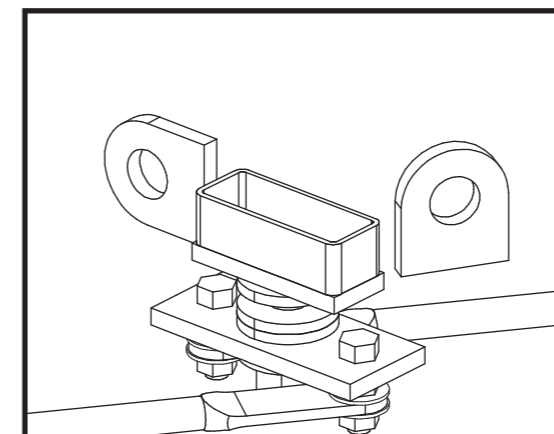
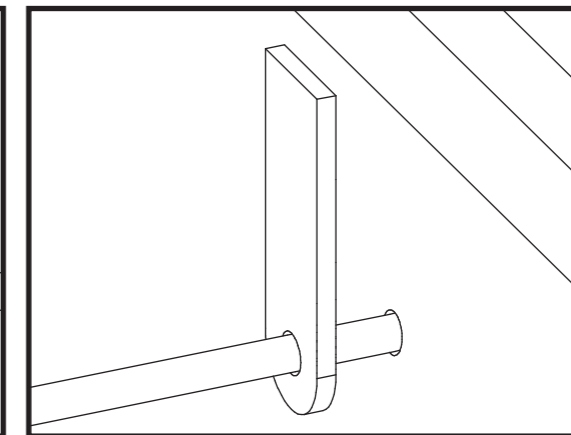
1. Steel checkerplate covers are manufactured in accordance to AS3678 & AS3679.1 with Grade 250 structural steel
2. All welding complies with all guidelines as set out in AS1554
3. All components are hot dipped galvanised after fabrication in accordance to AS1650, AS/NZS 4680:2006
4. Covers are lifted using a standard Telstra pit key
5. Class A,B & C covers finish flush with the top of the Mascot GRC Pit
6. Brass and Stainless Steel marker plates available
7. For details on Class D covers, please contact the technical team
8. Security keyhole plugs available
9. Padlocks are recommended to be a minimum security rating Level 6 and corrosion resistance Level 4



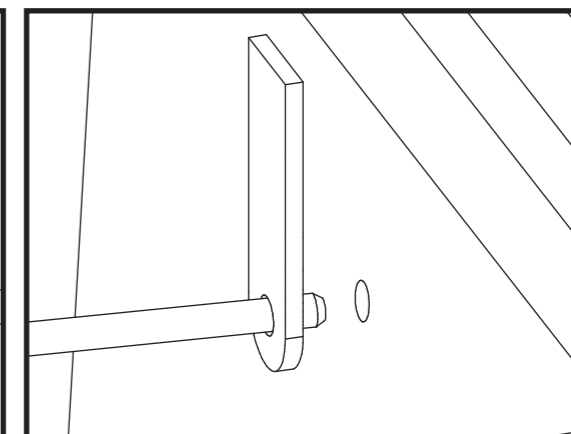
Suit Pit Range	Clear Opening	Load Rating	Cover Type	Weight	Product Code
CJP0	300 x 300	Class A	Steel GMS Padlockable	8kg	CJP0GMSMLA
CJP0	300 x 300	Class B	Steel GMS Padlockable	9kg	CJP0GMSMLB
CJP0	300 x 300	Class C	Steel GMS Padlockable	11kg	CJP0GMSMLC
CJP1	375 x 375	Class A	Steel GMS Padlockable	9kg	CJP1GMSMLA
CJP1	375 x 375	Class B	Steel GMS Padlockable	10kg	CJP1GMSMLB
CJP1	375 x 375	Class C	Steel GMS Padlockable	12kg	CJP1GMSMLC
CJP2	450 x 450	Class A	Steel GMS Padlockable	12kg	CJP2GMSMLA
CJP2	450 x 450	Class B	Steel GMS Padlockable	14kg	CJP2GMSMLB
CJP2	450 x 450	Class C	Steel GMS Padlockable	16kg	CJP2GMSMLC
CJP3	600 x 600	Class A	Steel GMS Padlockable	21kg	CJP3GMSMLA
CJP3	600 x 600	Class B	Steel GMS Padlockable	23kg	CJP3GMSMLB
CJP3	600 x 600	Class C	Steel GMS Padlockable	27kg	CJP3GMSMLC
CJP4	900 x 600	Class A	Steel GMS Padlockable	34kg	CJP4GMSMLA
CJP4	900 x 600	Class B	Steel GMS Padlockable	42kg	CJP4GMSMLB
CJP4	900 x 600	Class C	Steel GMS Padlockable	52kg	CJP4GMSMLC
CJP5	900 x 900	Class A	Steel GMS Padlockable	44kg	CJP5GMSMLA
CJP5	900 x 900	Class B	Steel GMS Padlockable	49kg	CJP5GMSMLB
CJP5	900 x 900	Class C	Steel GMS Padlockable	54kg	CJP5GMSMLC
CJP6	1100 x 1100	Class A	Steel GMS Padlockable	74kg	CJP6GMSMLA
CJP6	1100 x 1100	Class B	Steel GMS Padlockable	84kg	CJP6GMSMLB
CJP6	1100 x 1100	Class C	Steel GMS Padlockable	90kg	CJP6GMSMLC
CJP7	600 x 300	Class A	Steel GMS Padlockable	12kg	CJP7GMSMLA
CJP7	600 x 300	Class B	Steel GMS Padlockable	14kg	CJP7GMSMLB
CJP7	600 x 300	Class C	Steel GMS Padlockable	17kg	CJP7GMSMLC
CJP8	1250 x 450	Class A	Steel GMS Padlockable	30kg	CJP8GMSMLA
CJP8	1250 x 450	Class B	Steel GMS Padlockable	34kg	CJP8GMSMLB
CJP8	1250 x 450	Class C	Steel GMS Padlockable	44kg	CJP8GMSMLC
CJP9	585 x 245	Class A	Steel GMS Padlockable	12kg	CJP9GMSMLA
CJP9	585 x 245	Class B	Steel GMS Padlockable	14kg	CJP9GMSMLB
CJP9	585 x 245	Class C	Steel GMS Padlockable	17kg	CJP9GMSMLC



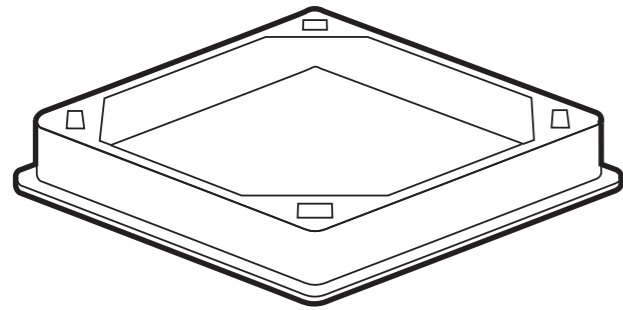
Z-LOCK ENGAGED



Z-LOCK DISENGAGED



Paver Infill Cover & Frame

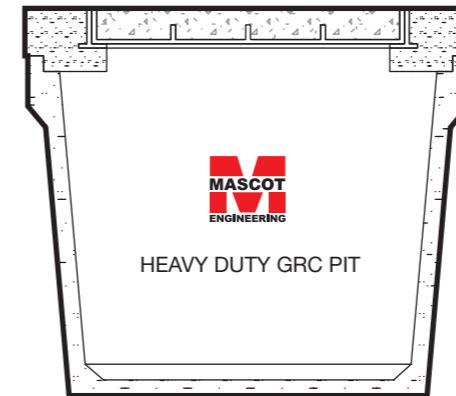


Notes

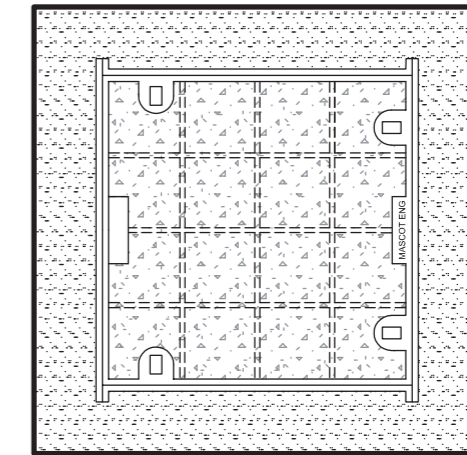
1. Covers allow for an infill depth of 75mm
2. All covers and frames manufactured from grade T220 iron (minimum) to conform to AS1830
3. Units are coated in bituminous paint complying with BS3416 type II
4. All are manufactured in accordance with AS3996
5. All covers supplied with lifting keyholes and plugs

Clear Opening	Load Rating	Cover Type	Weight	Product Code
450 x 450	Class B	Paver Infill Cover & Frame	51kg	PI44B
450 x 450	Class D	Paver Infill Cover & Frame	64kg	PI44D
600 x 600	Class B	Paver Infill Cover & Frame	65kg	PI66B
600 x 600	Class D	Paver Infill Cover & Frame	72kg	PI66D
900 x 600	Class B	Paver Infill Cover & Frame	119kg	PI96B
900 x 600	Class D	Paver Infill Cover & Frame	128kg	PI96D
900 x 900	Class B	Paver Infill Cover & Frame	130kg	PI99B
900 x 900	Class D	Paver Infill Cover & Frame	140kg	PI99D

Concrete-Encased Access Cover & Frame (Class A-G)



SECTION VIEW



PLAN VIEW

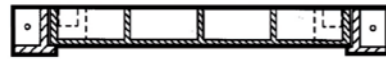
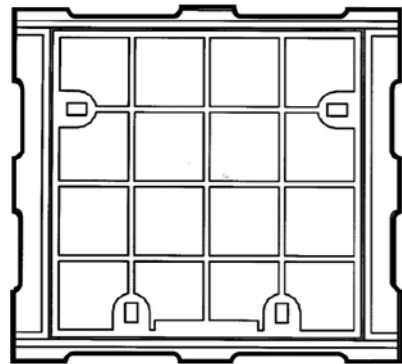
Notes

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 framed also available
7. All covers supplied with lifting keyholes and plugs
8. Concrete surrounds installed with swift lifts
9. Concrete is minimum 40MPa and conforms to AS1480, and reinforcement conforms to AS1302

Suit Pit Range	Clear Opening	Load Rating	Depth	Product Code
CJP2	300 x 300	Class B	150mm	CJP2SLC
CJP2	300 x 300	Class D	150mm	CJP2SHC
CJP2	300 x 300	Class G	150mm	CJP2SEHC
CJP3	450 x 450	Class B	150mm	CJP3SLC
CJP3	450 x 450	Class D	150mm	CJP3SHC
CJP3	450 x 450	Class G	150mm	CJP3SEHC
CJP4	600 x 450	Class B	150mm	CJP4SLC
CJP4	600 x 450	Class D	150mm	CJP4SHC
CJP4	600 x 450	Class G	150mm	CJP4SEHC
CJP5	600 x 600	Class B	150mm	CJP5SLC
CJP5	600 x 600	Class D	150mm	CJP5SHC
CJP5	600 x 600	Class G	200mm	CJP5SEHC
CJP6	600 x 600	Class B	200mm	CJP6SLC
CJP6	600 x 600	Class D	200mm	CJP6SHC
CJP6	600 x 600	Class G	250mm	CJP6SEHC

Custom size covers and concrete are available to suit your project. Class G depth may vary. Contact us for more information.

Gas & Watertight Cover & Frame (Class A-G)



Notes

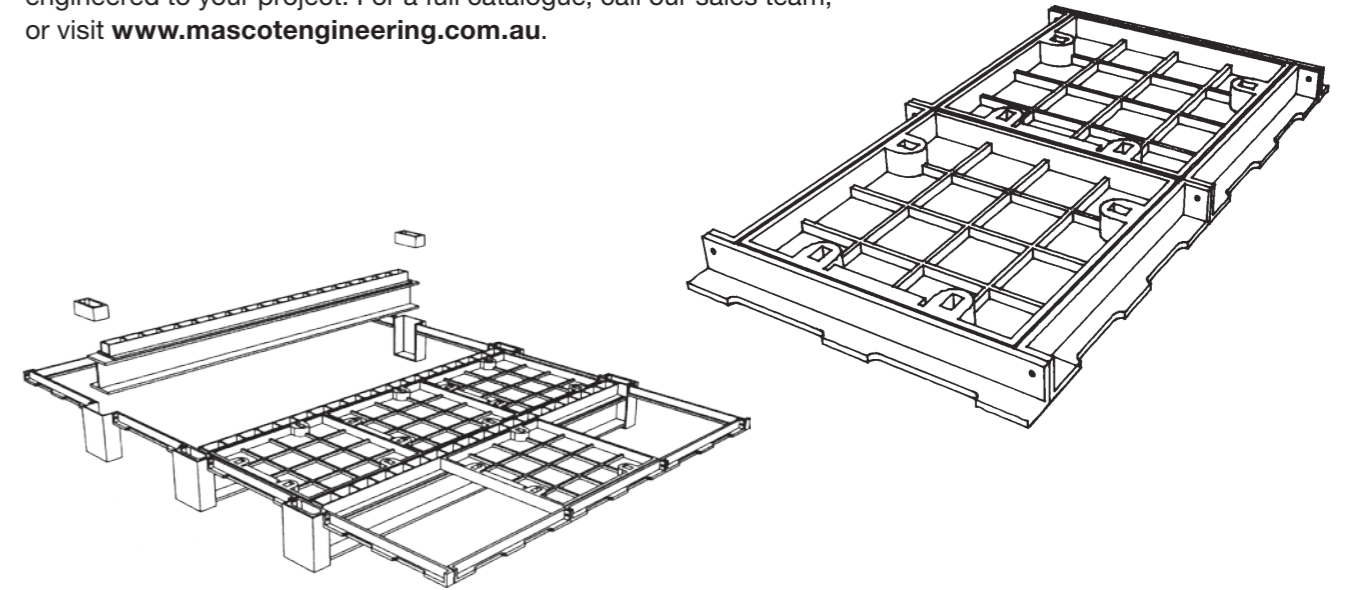
1. All covers and frames manufactured from grade T220 cast iron (minimum) to conform to AS1830
2. Castings are machined to form a gas and watertight seal
3. Units are coated in bituminous paint complying with BS3416 type II
4. All are manufactured in accordance with AS3996
5. Bolt down and security systems available
6. Two, three and multipart covers are framed 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

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

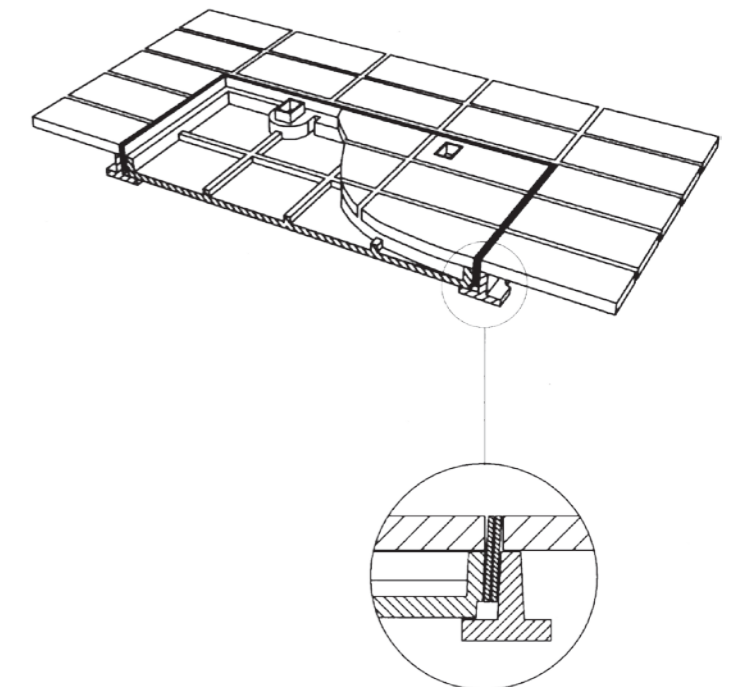
Two, Three & Multipart Covers & Frames

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.



Decorative Edge

When aesthetics are paramount, these Stainless Steel or Brass-edge Covers really blend in. Ideal for tiling, carpeting or paving, these covers are available in any size and load rating, and with an edge to suit your specifications.



Contact

To discuss your specific requirements call our Technical Team

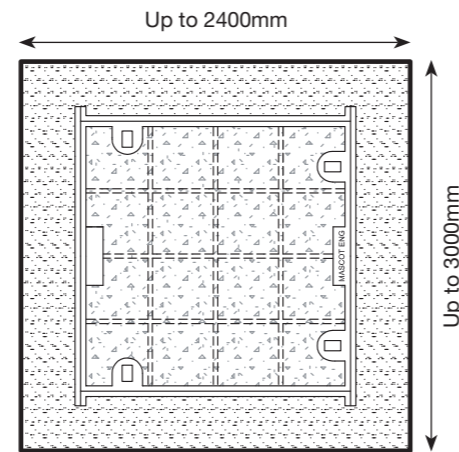
 **1300 885 295**

Custom Concrete-encased Access Cover & Frame

Our flexible manufacturing process enables us to create a cover to suit your project. Current capabilities allow for a concrete size of up to 2400mm x 3000mm and any number of sized access covers can be encased – even multiparts.

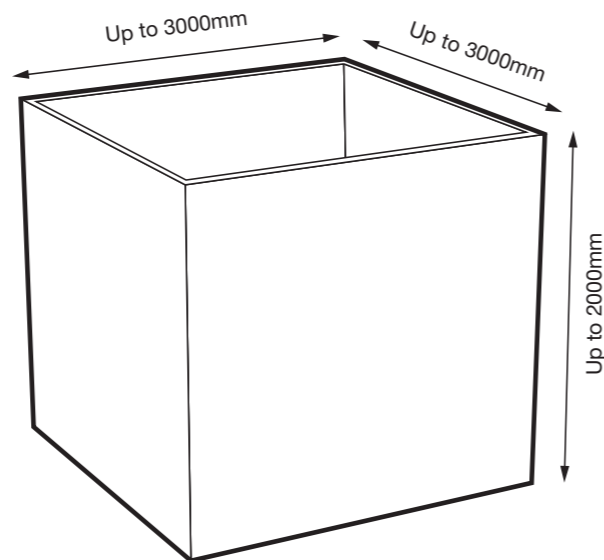
With complete engineering support, Mascot Engineering is able to save you time on-site by providing a product that simply sits over your large opening.

Call our Technical Support team on 1300 885 295 to discuss your requirements.



Large Custom Enclosures / High Voltage (HV) Pits

Mascot Engineering can provide small runs of custom concrete pits and covers in a range of sizes, depths and load ratings.



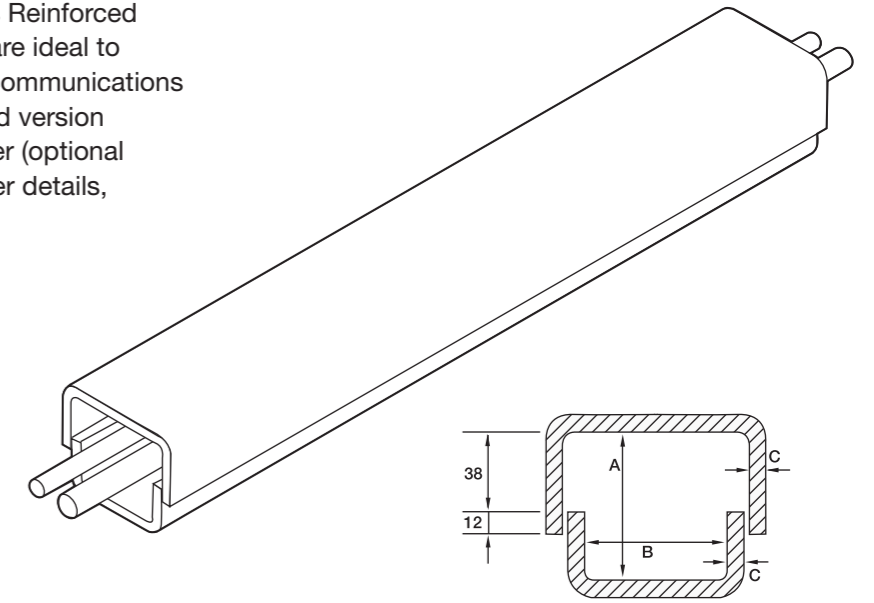
Contact

To discuss your specific requirements call our Technical Team

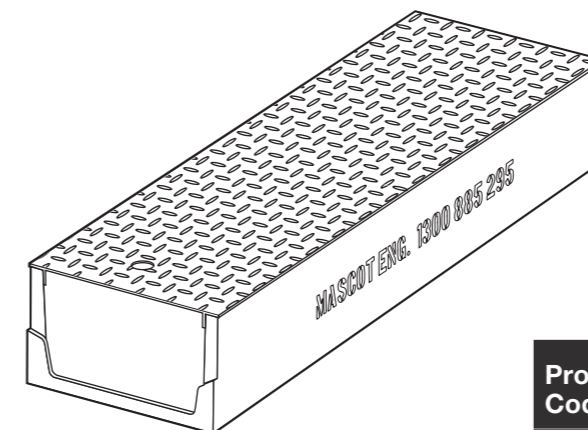
 **1300 885 295**

Cable Ducting – Conduit Boxes

Mascot Engineering's lightweight Glass Reinforced Concrete (GRC) Cable Ducting Boxes are ideal to encase high voltage, surveillance and communications cables. A heavier duty, surface mounted version complete with GMS Checkerplate Cover (optional bolt down) is available below. For further details, call the technical team.



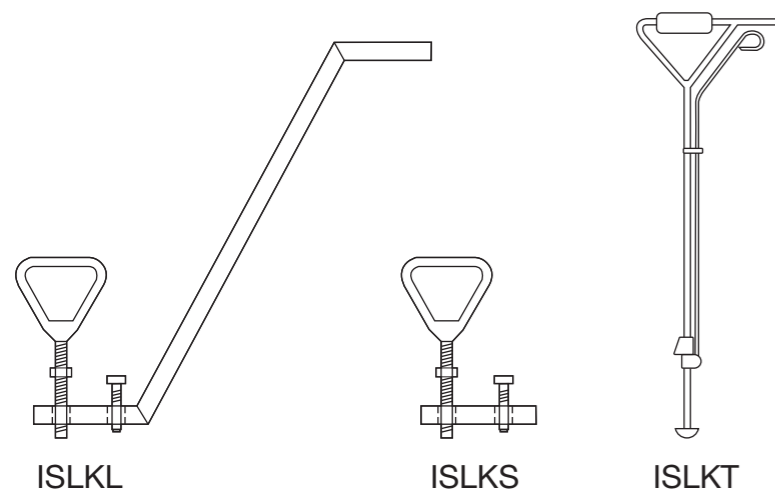
Product Code	A	B	C	Length
ECD1	75	75	9	1200
ECD2	100	100	9	1200
ECD3	143	143	9	1200
ECD4	175	175	9	1200
ECD5	225	225	9	1200



Product Code	Overall Width	Internal Width	Depth	Length	Weight Ex. Cover
CJPDD1	130	100	95	1000	8kg
CJPDD2	190	150	145	1000	14kg
CJPDD3	240	200	165	1000	16kg
CJPDD4	290	250	190	1000	18kg

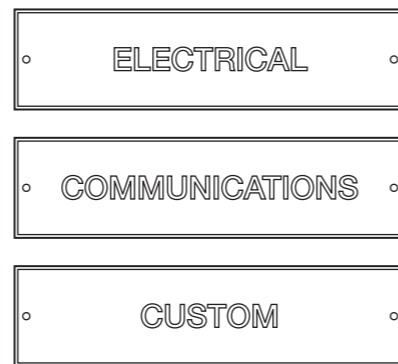
Accessories

Lifting Keys

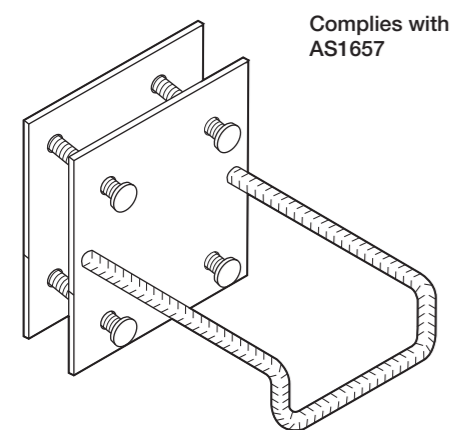


Marker Plates

Available in brass or stainless steel



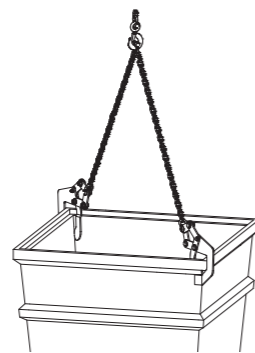
Step Irons



Complies with AS1657

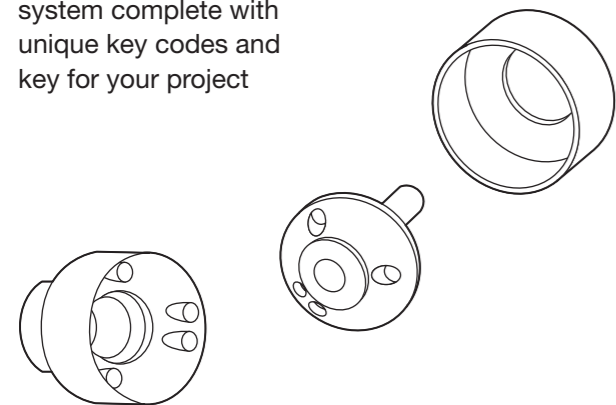
Engineered Pit Lifter

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



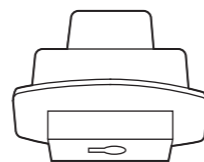
Security Bolts

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

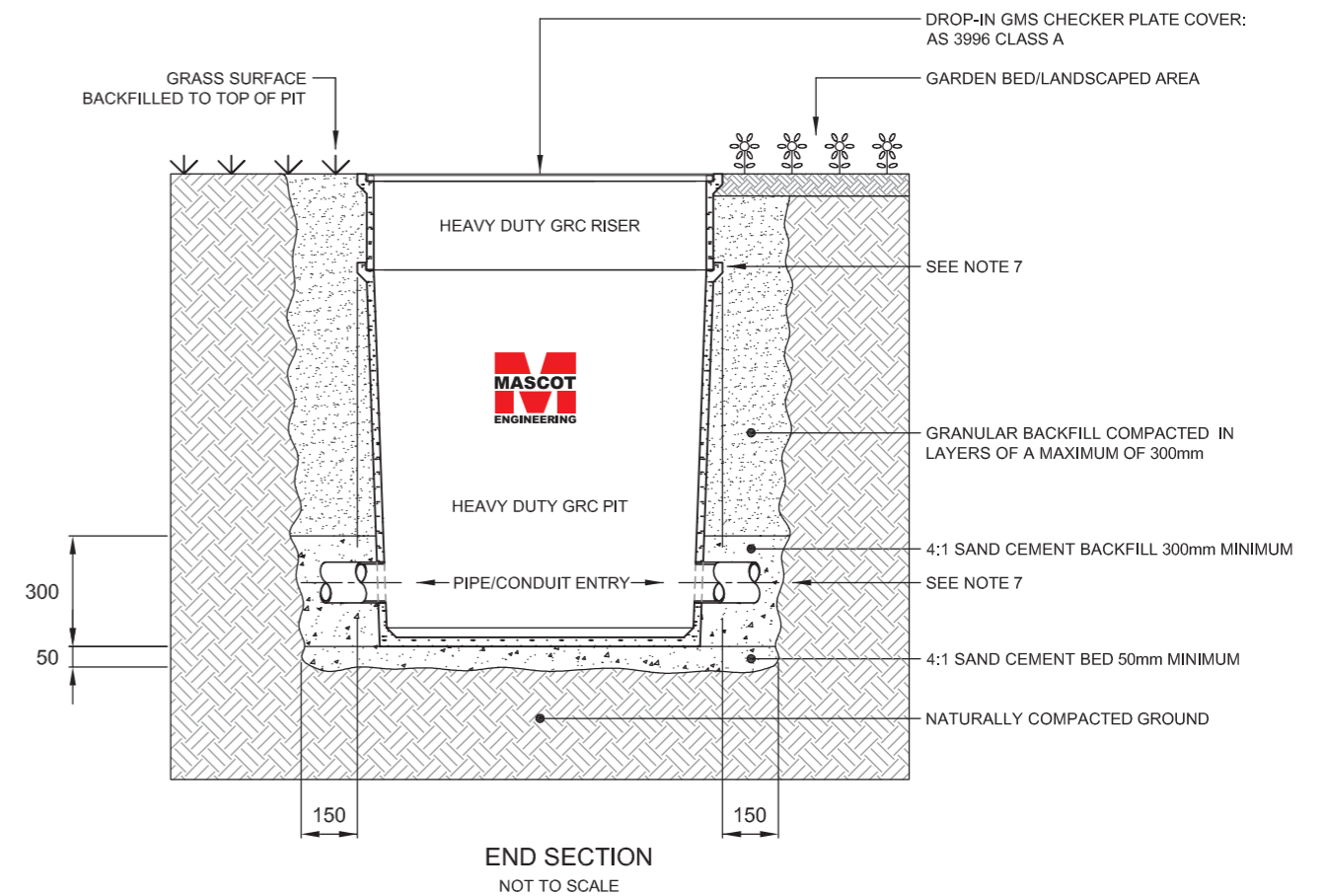
Join your pipes, risers, step irons and covers with Mascot's approved two-part epoxy. Available in a range of sizes.



Installation instructions (Class A)

Typical installation for pedestrian and pedal access for garden beds, landscaped and grass areas

Class A 330kg nominal wheel load
AS 3996-2606



Notes

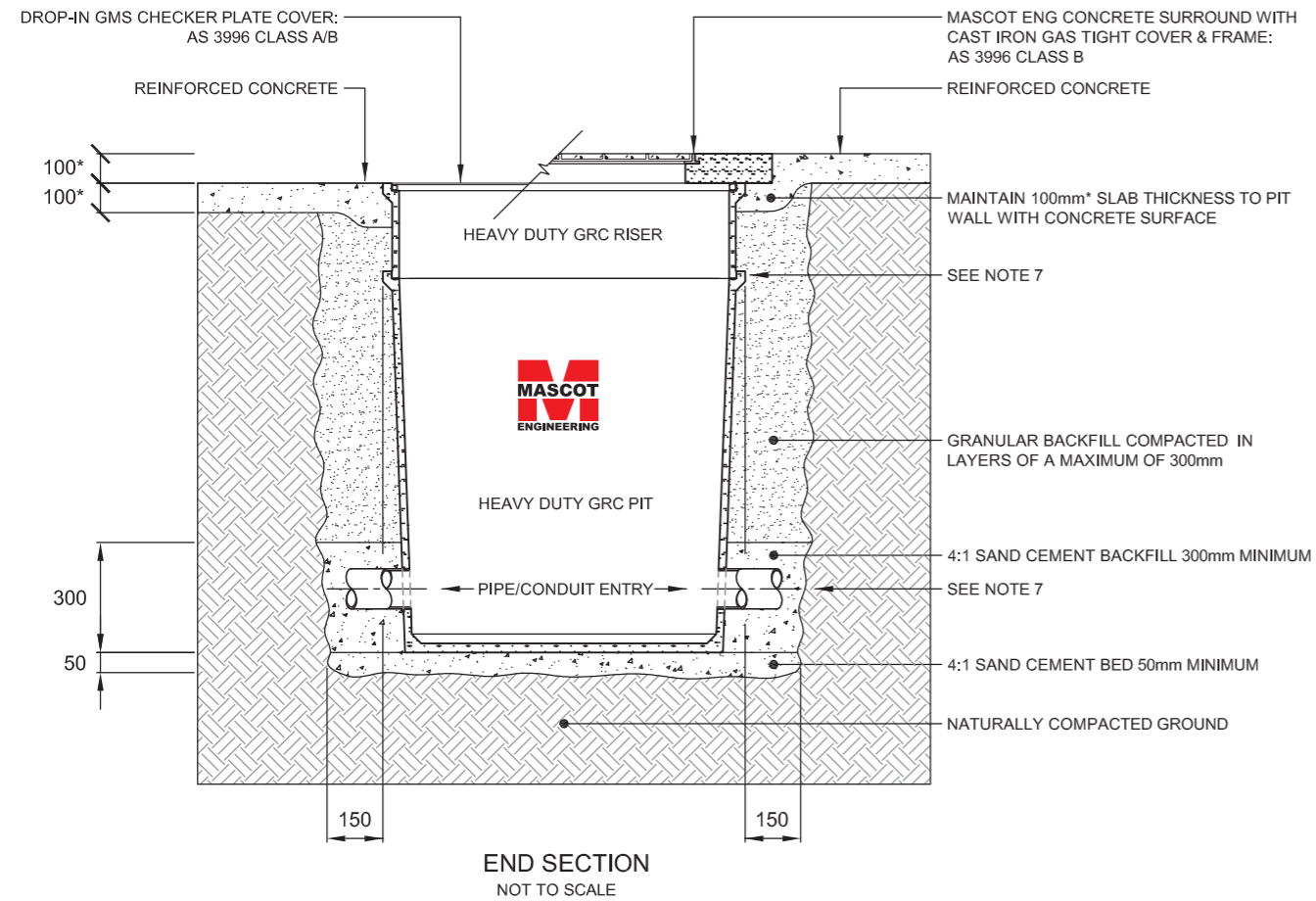
1. Approved for installations up to 5,000mm deep. Refer to note 5.
2. GRC MPa rating to 60MPa @ 28 days
3. When specific site conditions vary, consult design engineer/consultant
4. Risers are available
5. For installations in excess of 1,800mm deep, refer to special depth instructions: DWG No. GRCIISD
6. Any depths beyond 900mm, step irons are required at 250mm intervals, or as specified
7. For all pipe/conduit entries and riser joins, use Mascot's two part epoxy
8. For all further enquiries, contact Mascot on 1300 885 295

Drawing No: CPGRCIICA

Installation instructions (Class B)

Typical installation for pedestrian and pedal access and light vehicles for concrete surfaces

Up to Class B 2670kg nominal wheel load
AS 3996-2006



*Minimum slab thickness in mm

Notes

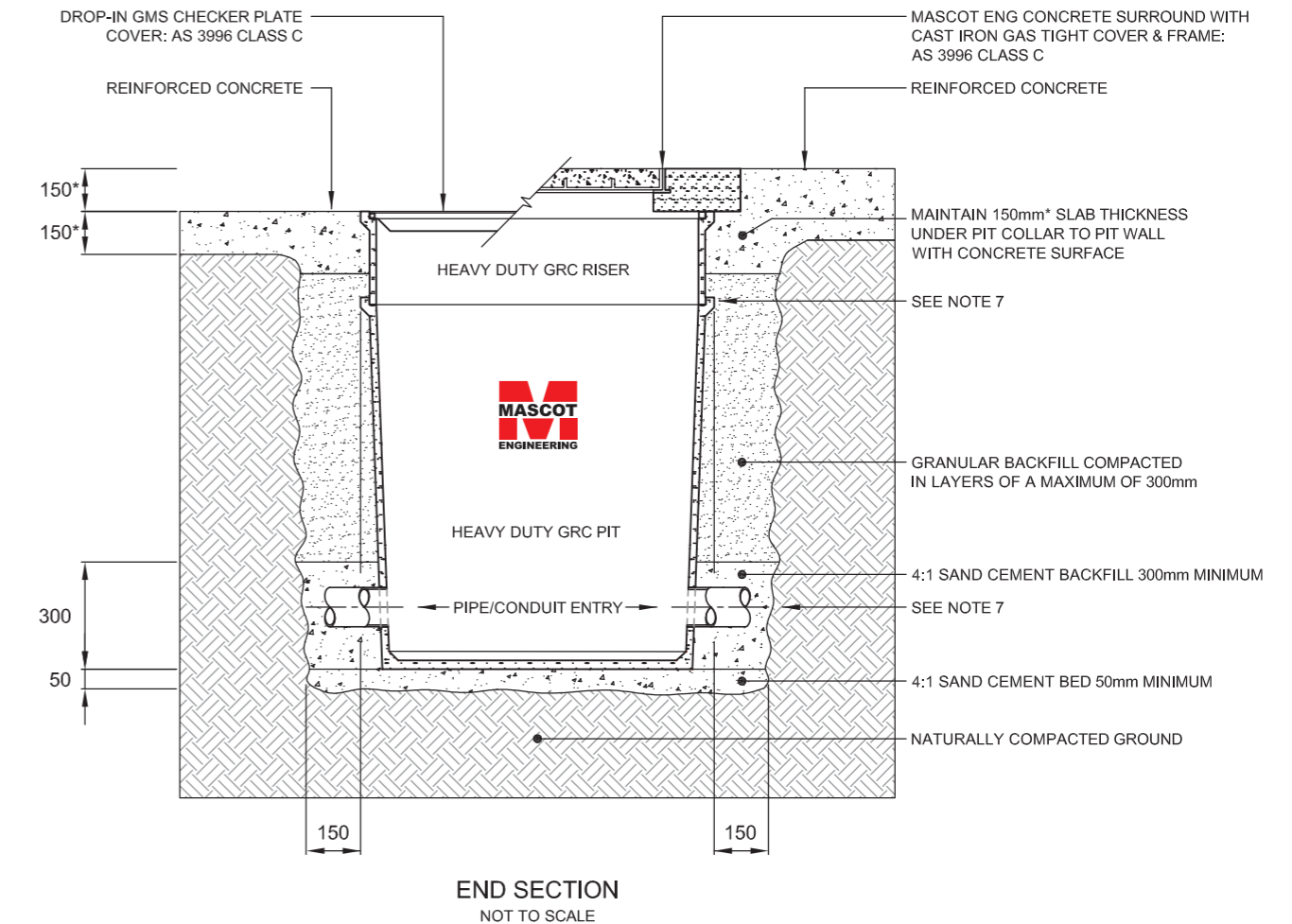
1. Approved for installations up to 5,000mm deep. Refer to note 5.
2. GRC MPa rating to 60Mpa @ 28 days
3. When specific site conditions vary, consult design engineer/consultant
4. Risers are available
5. For installations in excess of 1,800mm deep, refer to special depth instructions: DWG No. GRCIISD
6. Any depths beyond 900mm, step irons are required at 250mm intervals, or as specified
7. For all pipe/conduit entries and riser joints, use Mascot's two part epoxy
8. For all further enquiries, contact Mascot on 1300 885 295

Drawing No: CPGRCIICAB

Installation instructions (Class C)

Typical installation for medium duty traffic loads for concrete surfaces

Class C 5000kg nominal wheel load
AS 3996-2006



*Minimum slab thickness in mm

Notes

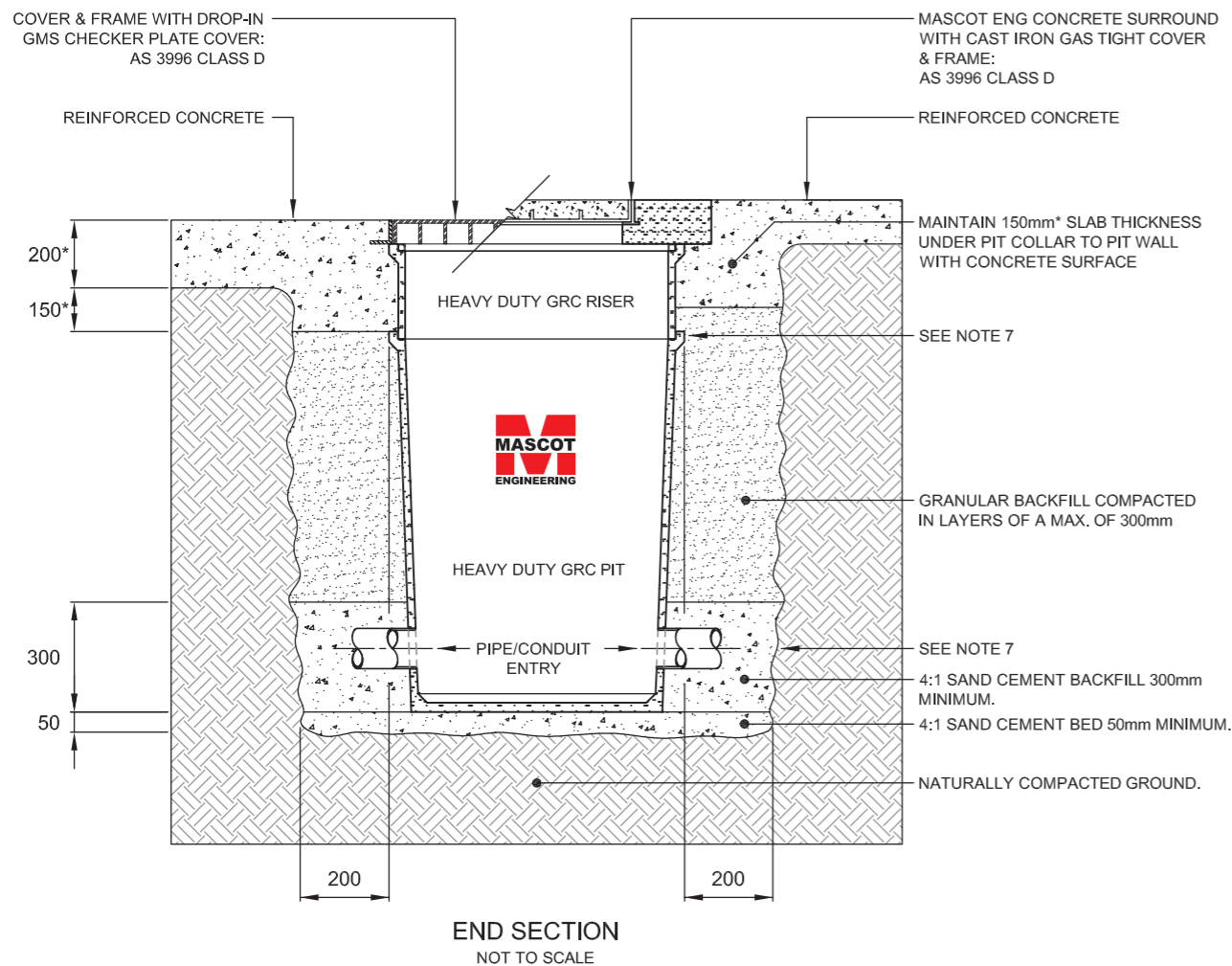
1. Approved for installations up to 5,000mm deep. Refer to note 5.
2. GRC MPa rating to 60Mpa @ 28days
3. When specific site conditions vary, consult design engineer/consultant
4. Risers are available
5. For installations in excess of 1,800mm deep, refer to special depth instructions: DWG No. GRCIISD
6. Any depths beyond 900mm, step irons are required at 250mm intervals, or as specified
7. For all pipe/conduit entries and riser joints, use Mascot's two part epoxy
8. For all further enquiries, contact Mascot on 1300 885 295
9. Instructions for installation in flexible pavement also available

Drawing No: CPGRCIICC

Installation instructions (Class D)

Typical installation for heavy duty traffic loads for concrete surfaces

Class D 8000kg nominal wheel load
AS 3996-2006



Notes

1. Approved for installations up to 5,000mm deep. Refer to note 5.
2. GRC MPa rating to 60Mpa @ 28days
3. When specific site conditions vary, consult design engineer/consultant
4. Risers are available
5. For installations in excess of 1,800mm deep, refer to special depth instructions: DWG No. GRCIISD
6. Any depths beyond 900mm, step irons are required at 250mm intervals, or as specified
7. For all pipe/conduit entries and riser joins, use Mascot's two part epoxy
8. For all further enquiries, contact Mascot on 1300 885 295
9. Instructions for installation in flexible pavement also available

Drawing No: CPGRCIICD

Special Interest Projects

Sydney Opera House, NSW
DTRS Rail Upgrade Sydney, NSW
Karratha Waste Water Treatment Plant, WA
Wonthaggi Desalination Plant, VIC
Rio Tinto Pilbara Waste Water Treatment Plant, WA
Port Botany Terminals, NSW
Southern Sydney Freight Line, NSW
Sherwood Bus Depot, QLD
Kooragang Island Port, NSW
Qantas Sydney Airport Hanger Upgrade, NSW
Melbourne Airport Fire Brigade Training Centre, VIC
Melbourne Airport T4 Car Park, VIC
Mackay Airport, QLD
Gladstone Airport, QLD
Silverwater Correctional Complex, NSW
Humes Concrete Redbank Plains Depot, QLD
Royal Randwick Racecourse, NSW
Australian Nuclear Science & Technology Organisation (ANSTO), NSW
Centro Shopping Centres, Australia-wide

Westfield Shopping Centres, Australia-wide
Bunnings Stores, Australia-wide
Masters Hardware Stores, Australia-wide
Barangaroo Development, NSW
BP Service Centres, Australia-wide
Reedy Creek Mine, QLD
Australian Federal Police Forensic Facility, ACT
National Sports Centre, ACT
Greta Train Stabling Yard, NSW
Wet n Wild, NSW
Parliament House, NSW
Primary & Secondary Schools, Australia-wide
HMAS Single Leap 2 Projects, Australia-wide
Military Base Infrastructure Works, Australia-wide
Dubbo Hospital, NSW
Auburn Hospital, NSW
Global Switch Sydney East Data Centre, NSW
Regional Rail Link Stations, VIC
Sydney Harbour Tunnel, NSW
Many, many more...

On-site support



Experienced Mascot Engineering team members are available to assist with inspection, engineering and installation advice.
Contact **1300 885 295** to discuss your next project.

Mascot 4YOU



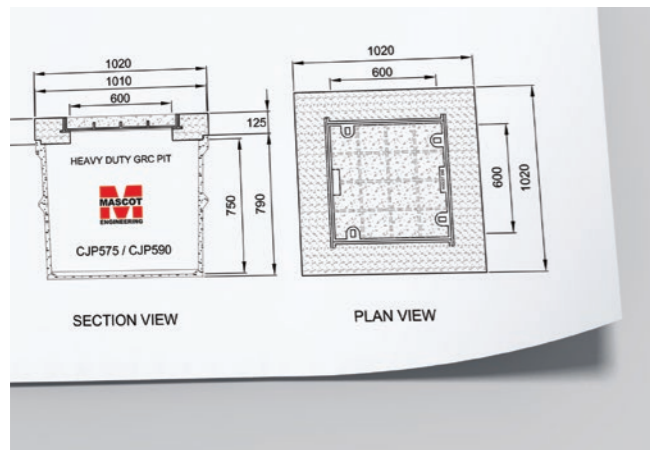
Real support when you need it
An experienced and dedicated team of professionals, working 4YOU

Technical Support
Project Estimating
Key Account Management

1300 885 295
quotes@mascoteng.com.au

Australia-wide sales enquiries

Specification Support



Enclosure Selection
Installation Advice
Custom Enclosures (Cover Design)
PDF & DWG Files Available

Civil Products



For detailed information on our large range of single, two, three and multipart covers contact us for a copy of our Civil Products Specifications Book or visit www.mascotengineering.com.au.

Servicing Australia



More great products from Mascot Engineering

- ✓ Access Covers
- ✓ Drainage
- ✓ Grates & Frames
- ✓ Trade Waste
- ✓ Landscaping



Contact



1300 885 295



1300 885 296

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www.mascotengineering.com.au

