

GLA00051 & GLA00052

POLYMER CONCRETE COPING AND LID WITH MECHANICAL LOCK ON GRC CHAMBER



BBBEE Level 2 Contributor

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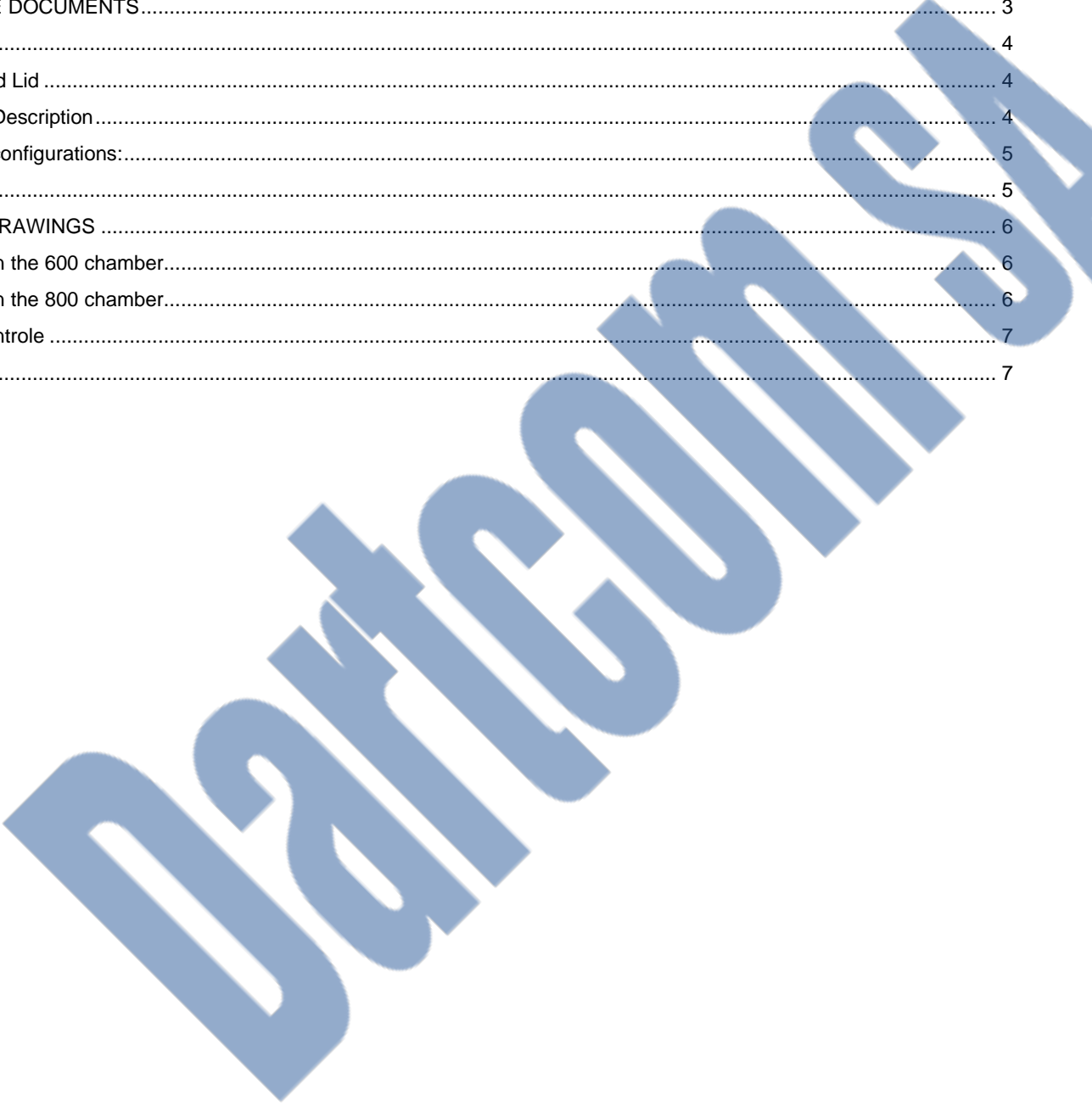
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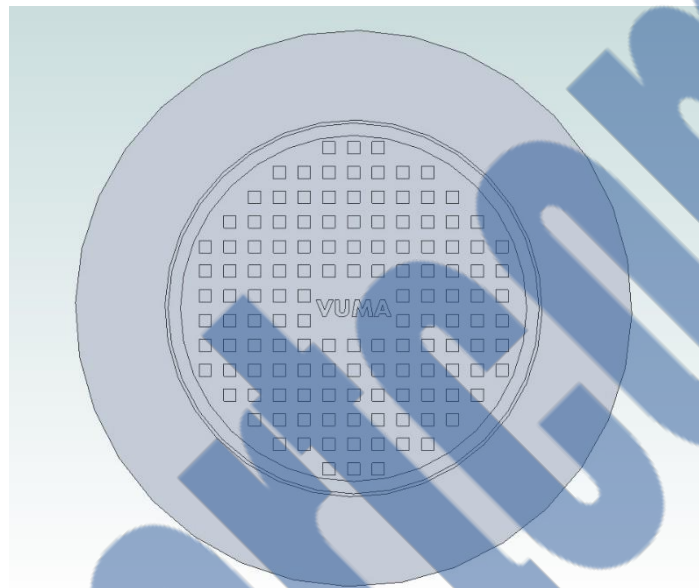
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1. SCOPE

- a. This Document describes the Polymer Concrete modular manholes used in the telecommunication network predominantly in the FTTH (Fibre To The Home Network) environment to access underground infrastructure like fibre optical cable, ducts along with Splice enclosures.
- b. The schematic in figure 1 indicate the basic components:
 - Polymer lid
 - Polymer concrete ring beam
 - Standard mechanical lock

Figure 1



2. REFERENCE DOCUMENTS

- a. SANS 558
- b. SANS 1882

3. PRODUCT LIST

3.1 Coping and Lid

1. The Coping and lid is a manufacture from Polymer Concrete.
2. Critical branding can be moulded into the lid during manufacturing

Figure 2



3. The Coping is available in 2 different sizes to match the required chamber size.
900mm coping with 600mm lid
700mm coping with 450mm lid
4. Polymer coping is load rated for Medium duty 5 tons

3.2 Chamber Description

- a. The chamber is manufactured with Glass Fibre Reinforced concrete and consists of a barrel and baseplate with a drainage hole 50 mm diameter in centre of base plate.
- b. 4 x PVC small cable trays are installed
- c. Chamber is fitted with 110mm entries hole with a Plastic entry cap. This can be changed to customer requirements.
- d. Chamber can be supplied in a solid base or split base design to accommodate existing infrastructure.

3.3 Standard configurations:

Medium manhole uni-bottom 600dia x800mm with medium duty polymer cover, lid & lock	1 x 600dia x 800mm fibre-cement uni-bottom manhole, 1 x GRC baseplate with drainage hole 50mm diameter in centre of base, 4 x PVC small cable tray, 12 x 110mm entries, 1 x polymer coping, 1 x polymer lid and lock (medium duty 5 tons), 1 x pallet and 1kg epoxy
Medium manhole split-bottom 600dia x800mm with medium duty polymer cover, lid & lock	1 x 600dia x 800mm fibre-cement uni-bottom manhole, 1 x GRC baseplate with drainage hole 50mm diameter in centre of base, 4 x PVC small cable tray, 10 x 110mm entries, 1 x polymer coping, 1 x polymer lid and lock (medium duty 5 tons), 1 x pallet and 1kg epoxy
Medium manhole uni-bottom 800dia x 800mm With medium duty polymer cover, lid & lock	1 x 800dia x 800mm fibre-cement uni-bottom manhole, 1 x GRC baseplate with drainage hole 50mm diameter in centre of base, 4 x PVC small cable tray, 20 x 110mm entries, 1 x polymer coping, 1 x polymer lid and lock (medium duty 5 tons), 1 x pallet and 1kg epoxy
Medium manhole split-bottom 800dia x 800mm With medium duty polymer cover, lid & lock	1 x 800dia x 800mm fibre-cement split-bottom manhole, 1 x GRC baseplate with drainage hole 50mm diameter in centre of base, 4 x PVC small cable tray, 18 x 110mm entries, 1 x polymer coping, 1 x polymer lid and lock (medium duty 5 tons), 1 x pallet and 1kg epoxy
Key	1 x key provided per 30 manholes

4. INSTALLATION

STEP 1: (Bedding Practice)

- In the bottom of the excavation, prepare a true and level bed 50mm thick of river sand, crusher sand, fine clean gravel (particle size < 6 mm) or cement stabilized topping material.
- In the area below the drainage hole, the bottom of the excavation should be over-excavated to a depth of 200mm, with horizontal dimensions of 300x300mm. This area shall be filled with aggregate of average 10 - 15mm size. Place the handhole carefully on the bed ensuring proper and even seating before backfilling.
- Move base to ensure that the holes are in the correct position for the ducts being used.

STEP 2: (Backfilling)

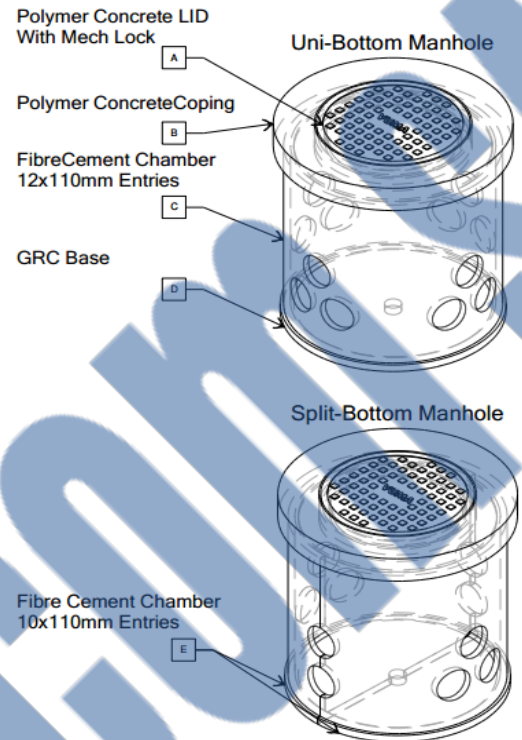
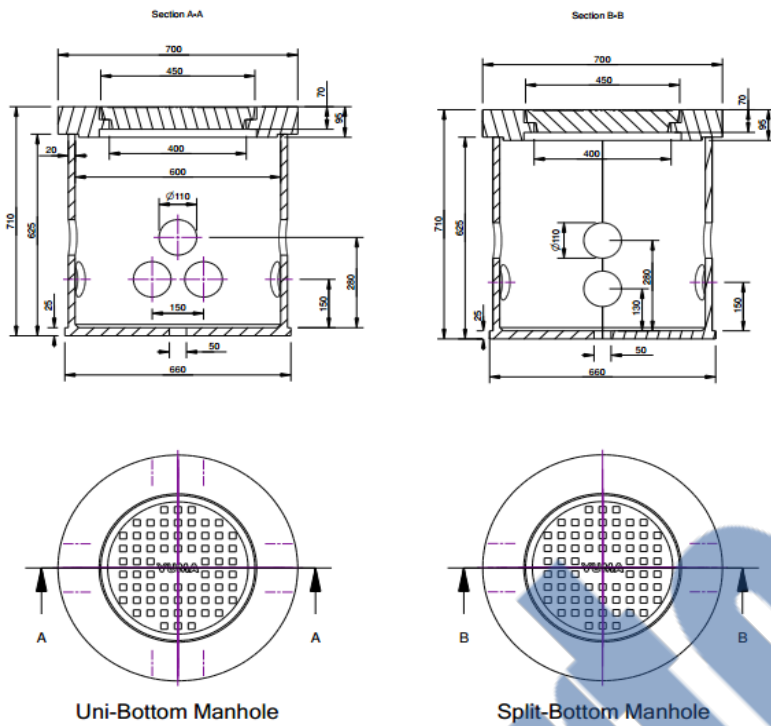
- Proceed with backfilling in 250 mm layers.
- Compaction should be done using hand tools only as machine compaction may damage the handhole.
- Only selected, inert granular material should be used as compacted backfill. It is especially important that the excavated material consisting of rock, peat or clay should not be used as backfill material
- 4. Compacted backfilling shall always be at least the same strength and serve the same the purpose as the surrounding soil except where extraneous conditions like swampy ground, high water table or generally poor soil conditions are encountered. These latter conditions will necessitate extra, precautionary backfill procedures such as cement-stabilization of typically compacted selected, inert granular material as approved by a civil engineer.

STEP 3: (Gradients)

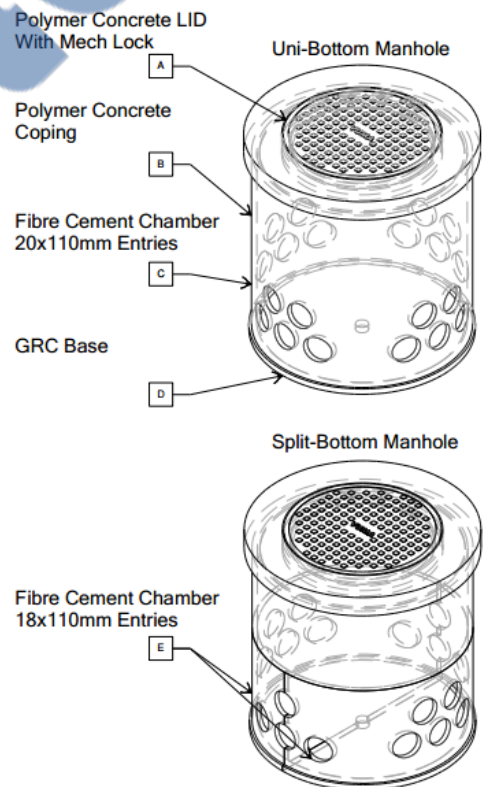
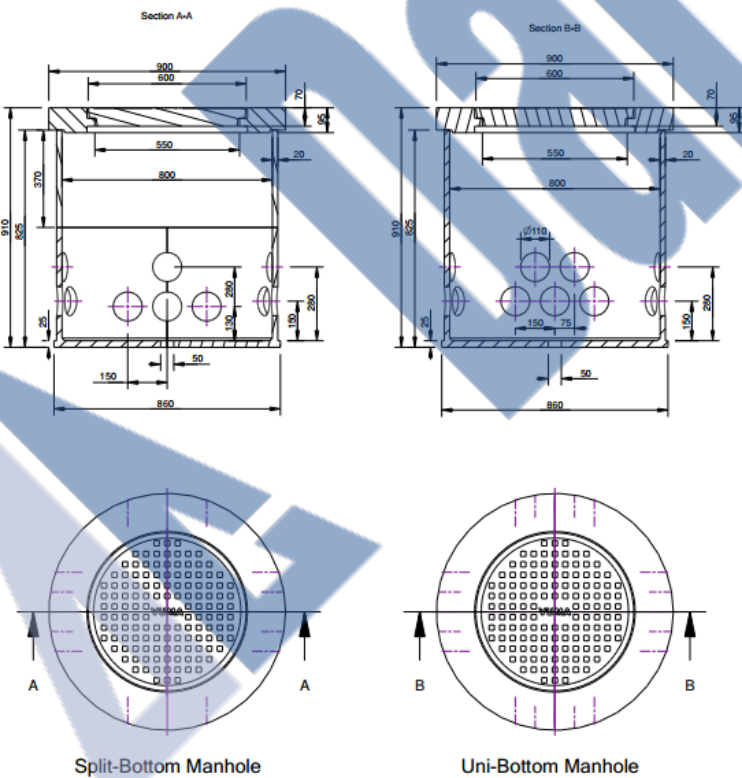
- 1. On gradients or in areas where the normal contours or slope of the area will not suffice to ensure a level handhole roof area, a small retaining wall/structure should be provided.
- 2. At the same time, the risk of a retaining wall should be considered and shall be visible above ground level for public safety. In the unlikely circumstances of a handhole being constructed where high risk is involved, danger (chevron) markings should be provided onto the handhole top side/s and/or a pole-fitted next to the handhole.

5. PRODUCT DRAWINGS

5.1 Drawing on the 600 chamber



5.2 Drawing on the 800 chamber



6. DOCUMENT CONTROLE

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Update notes

- Update image page 1
- Update cover letter / page company details
- Moderate document format and all sections for correctness

7. END