







Sliding Lid

SA Patents 2012/08045, 2016/07488

extreme security for valve chambers

A sliding lid (see fig 1) has the advantage of not working against gravity and can therefore be sized to close off relatively large openings in valve chambers. The opening shown in fig 2 is 900mm x 900 mm, and is covered by a lid that is 1300mm x 1300mm in plan area (see fig 1), but the lid could just as easily have been 2500mm x 2500mm to secure an opening of 2100mm x 2100mm, sufficient for large valves.

The lid has three SS wheels situated in concealed pockets underneath (see fig 3). These wheels run on steel rails (see fig1 & fig 2) that are fastened to the slab with multiple anchors. The lid slides open with minimal effort (see fig 4) and can be unlocked and opened in less than a minute.

The lid is 200mm thick and is made from densely reinforced 60 MPa concrete – making it extremely vandal resistant.

Manufactured & installed by Concrete Doors & Vaults(Pty) Ltd.

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Neither are vandals able to lift the lid off the rails - firstly it has considerable weight (900 kg in the case of fig 1), but more importantly there are two robust brackets that captivate the lid, but without restricting its sliding motion. These brackets are indicated by (a) and (b) in fig 5 — which is a view of the lid in the closed position from inside the valve chamber. Fig 6 shows another view of bracket (a), and in this case the lid is almost open. It is evident that the head of the bracket is situated within a lipped channel that is part of the lid.

Fig 7 shows the various elements of the lid's robust three-tier locking system, all made from stainless steel. The various elements are (d) the access tube that goes all the way through the lid; (e) the plug that seals off the access tube; (f) the cylindrical lock that locks the access tube just below the plug; (g) the locking pin that also fits into the access tube, directly below the cylindrical lock. The lower part of this pin slides into a bracket fastened to the valve chamber so preventing the lid from sliding. (This bracket is shown as (c) in fig 5). The plug, lock and pin are all removed from the access tube by the key assembly (h) to render the lid free to slide open.

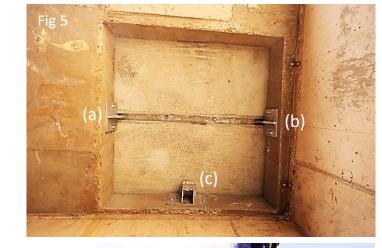
Credits:

Project: Upgrading of Mabopane Bulk Water Supply

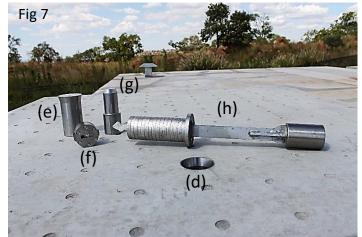
Client: City of Tshwane

Consultant: Tlou Engineering

Main Contractor: Ditshimega Projects







See <u>www.concretedoorsandvaults.com</u> for other anti-theft/vandalism products in our range, including various doors, vaults, vents, and other types of lids..