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Precast Concrete Manhole and Inspection Chambers – Data Sheet

Purpose of use: For the permitting of access to, and to allow aeration of, drain or sewer systems for the conveyance of sewerage, rainwater and surface water under gravity or occasional low head of pressure, in pipelines that are generally buried.

Manufactured to: BS EN 1917 and BS 5911-3 & 4.

Certification of products: 'CE Marked' and 'Kitemarked' products as applicable.

Product strength class: Chamber sections - Class 15 to 30 dependent upon nominal size.
Cover/reducing slab – DN900-DN1200 - 1 x 120kN load (EN 1917)
DN1350-DN1800 - 1 x 250kN loads (BS5911-3)
DN2100-DN3000 - 2 x 250kN loads (BS5911-3)
Landing slab – 1 x 50 kN load (BS5911-3)
Corbel slab – 1 x 250 kN load (BS5911-3)

Jointing materials: Bitumen, butyl or rubber based products (rubber seals conforming to EN 681-1).

Water/cement ratio of concrete: Not greater than 0.45.

Chloride content of concrete: Not exceeding 1.0% (unreinforced products), or 0.4% (reinforced).

Water absorption of concrete: Not exceeding 6% by mass.

Finish: Functional surfaces of joint profiles shall be free from irregularities that would preclude a durable watertight assembly. Other areas of the products are checked for surface evenness and surface voids.

Durability of product: Concrete mix to DC-4 of BRE Special Digest 1:2005.

Concrete strength: Not less than 40 Mpa (N/mm²).

Water-tightness: Products with wall thickness of 125mm or less routinely tested to a hydrostatic test pressure of 50 kPa for manholes, 30 kPa for inspections chambers and 15 kPa for HIC units (not applicable to soakaway units).

Tolerances: Internal bore/length: range of +/- (3+0.005DN)mm.
Internal effective height: +/-4% of nominal height.

Minimum concrete cover to reinforcement: 25mm nom slab and ring (slab 20mm min, other products 15mm min).

Products with installed lifting anchorage: Routine pull-out test.

Products with installed steps: Steps conforming to BS EN 13101 and routinely tested for pull-out and deflection under load.

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