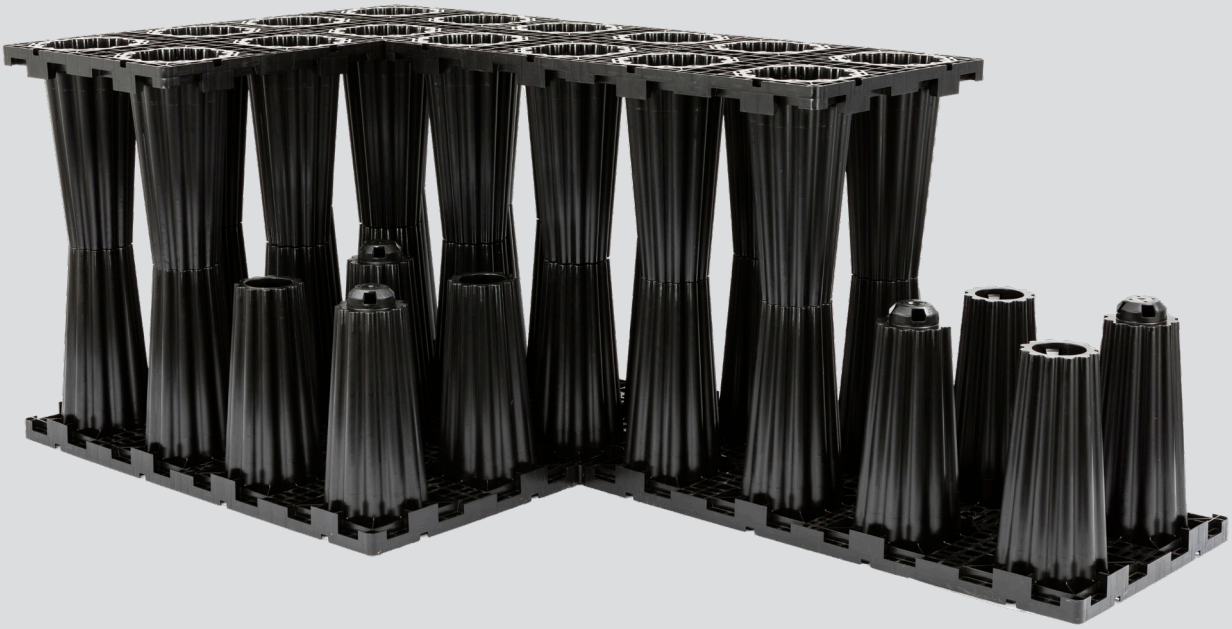
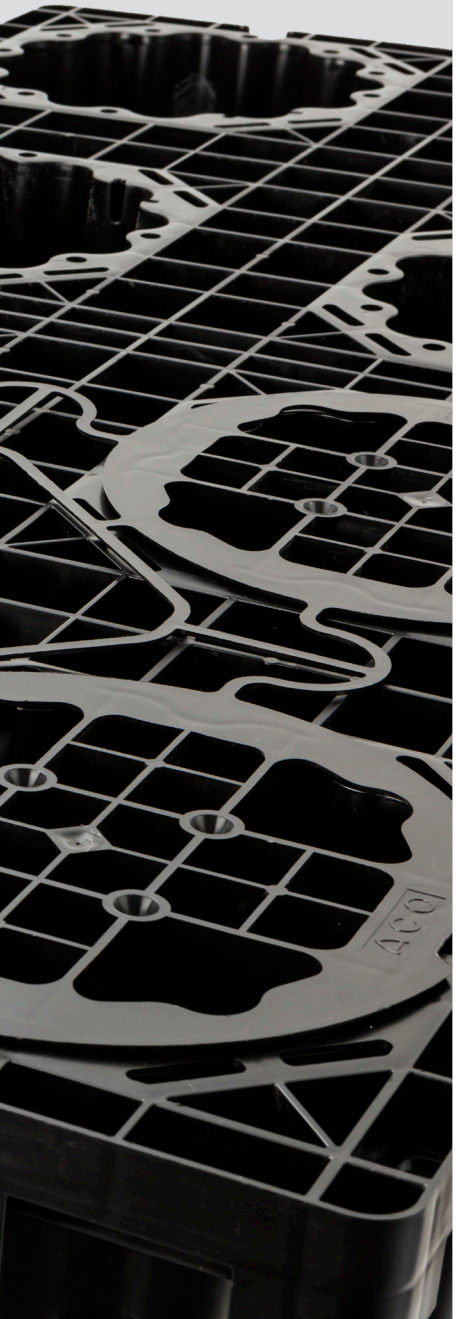
ACO StormBrixx SD and HD

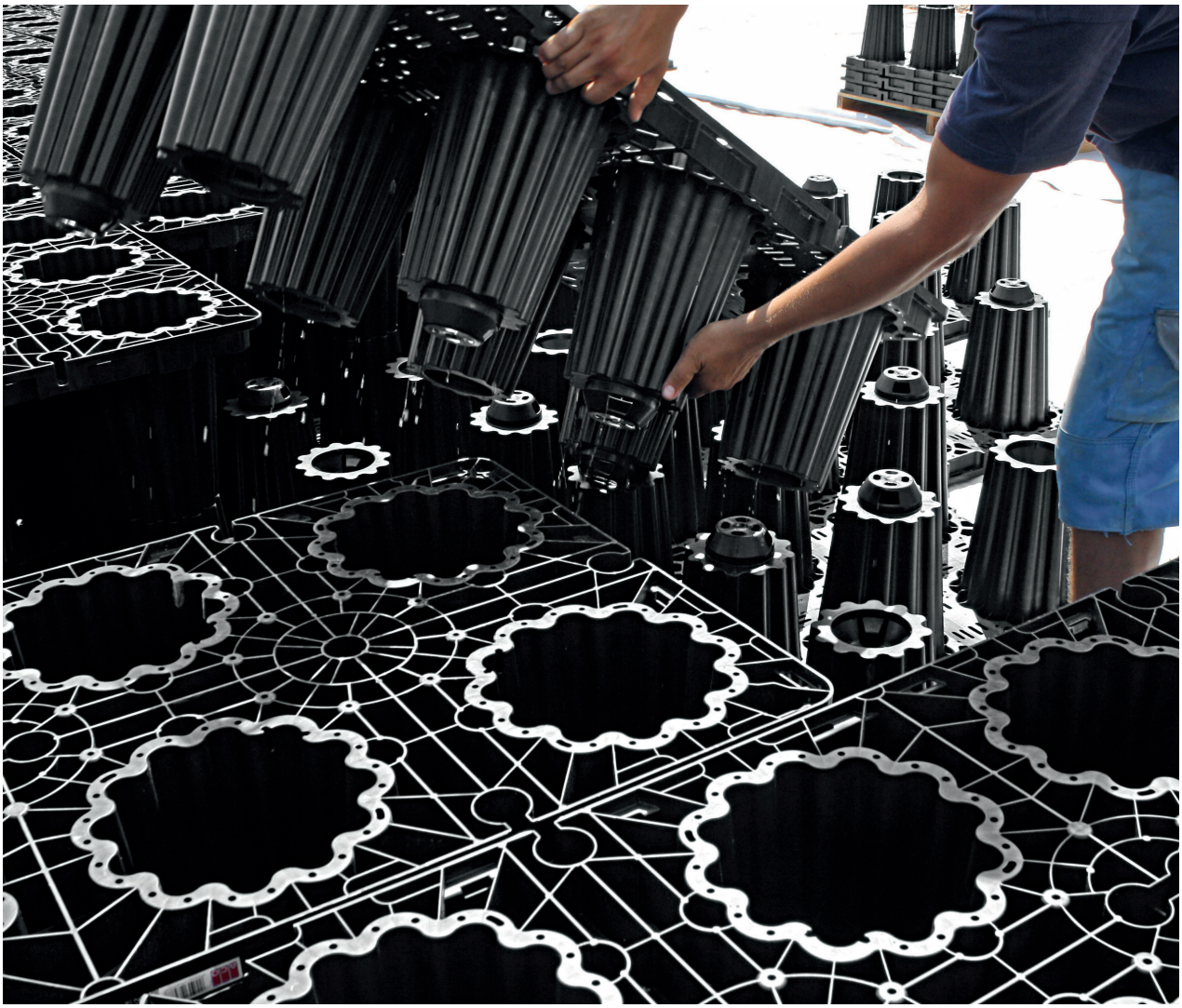
MAINTENANCE AND INSPECTION MANUAL




ACO

Contents





Information for operators

If the owner and the operator are not one and the same, then it is helpful to agree:

- Who is responsible for day-to-day operations?
- Who is responsible for initiating maintenance or repairs for the plant?
- Who will react when there is a malfunction?
- The operator is responsible for the siting (design and dimensions), installation and operation of the system.
- The owner has to ensure that that the operator or person responsible has a copy of the maintenance manual.

It is the responsibility of the operator to ensure the following points are respected:

- The system must only be used as intended and in a good operating condition.
- Maintenance timetables are adhered to and malfunctions dealt with swiftly.
- Only qualified and authorised staff are used.

Visual inspection, maintenance and cleaning of ACO StormBrixx

Thanks to the intelligent building block architecture of ACO StormBrixx, which requires easy-to-erect side panels to be installed to the external perimeter only, the total volume of the installation attenuation/infiltration system can be accessed for inspection and maintenance.

Maintenance work and requirements should be carefully considered during the planning/design phase. Access turrets, sediment tunnels/forebays, and low flow channels can all be incorporated into the StormBrixx system, but the number and combination of these details should be specified as early as possible. In addition to this, we recommend adhering to all the current relevant legal requirements.

During the construction phase, care must be taken to ensure that no sediment enters the inlet pipes, shafts and the infiltration system. At the construction phase an increase in the volume of sediment must be expected from the connected surfaces and must be counteracted.

Maintenance Fequency

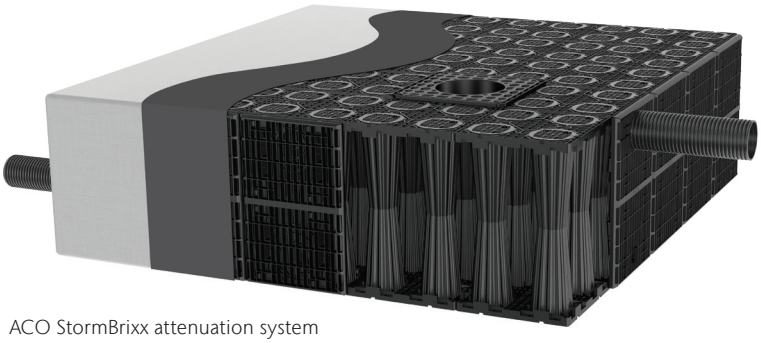
The initial inspection/cleaning of the ACO infiltration system should take place after completion and before handover, so forming part of the commissioning of the installation. A visual inspection of the shafts and a camera passage through the pipes and the storage system is recommended. The results should be recorded in an operating logbook.

To guarantee long-term operability, the recommendations of the current relevant legal requirements must be respected.

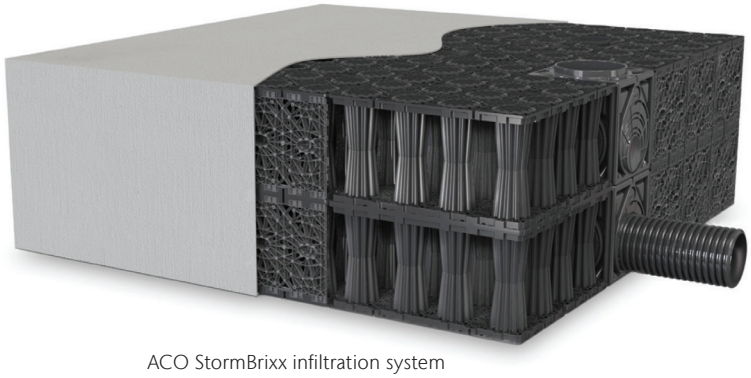
A visual inspection should be carried out at least twice a year, preferably in the spring (high pollen levels) and autumn (falling leaves). If necessary, maintenance/cleaning should be undertaken.

The operator is responsible for ensuring that all maintenance work is carried out by qualified expert staff, who are fully aware of the maintenance and operating instructions. Relevant accident prevention regulations must be respected. The results of the inspections carried out can then be used to determine the frequency of maintenance interventions in future.

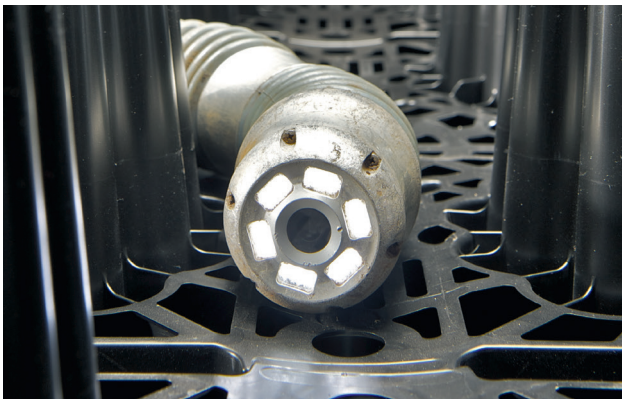
If unusual weather conditions occur (heavy rainfall or similar), additional inspections and/or maintenance are recommended.



ACO StormBrixx attenuation system



ACO StormBrixx infiltration system



Camera and jetting nozzle

The inspection and cleaning access points, consisting of access chambers, intermediate sections and upper parts, provide an easy way for sewer cameras, jetting nozzles and jetting lances to access the ACO StormBrixx hollow block infiltration system.

Cleaning

The cleaning of the ACO StormBrixx infiltration system can, if necessary, be carried out using sewer cleaning equipment (sewer cleaning technology/high-pressure washing). The maximum water pressure must not exceed 100 bar.

The water can be sucked out through the upper, intermediate and lower shaft sections. When disposing of the cleaning water/sediment all applicable legal requirements must be observed.

Visual inspection

Visual inspection includes the following points:

- The condition of the infiltration space (side walls, bases, covers, columns)
- Connecting pipes

If there are signs of leakage, the water-tightness of the system must be re-established by suitable tests. If faults are detected during the visual inspection (dirt, distortions etc.) these must be corrected immediately.

Operating logbook

The results of the visual inspection and any maintenance and repair measures undertaken must be recorded in an operating logbook. These records then allow decisions to be made about the necessary frequency of future visual inspections and maintenance measures.

The following data and information must be recorded in the operating logbook:

- Date of visual inspection or maintenance work
- Identity of staff involved
- Problems arising (also causes of problems)
- Measures taken

Keeping a logbook has many benefits, e.g. traceability of sources of problems, targeted error analysis and determination of follow-up measures.

Warranty

Please refer to the relevant section in the general terms and conditions of sale of the ACO company in your country.

Inspection and maintenance access

Completely installed attenuation/infiltration system with ACO StormBrixx SD:

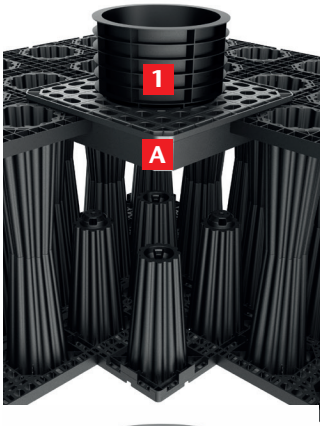
- Adapter for shaft construction (A) within the overall system
- Upper part (1)

Entrance via access plate

The ACO StormBrixx Adapter for shaft construction (A) is installed as an inspection access **within the block attenuation/infiltration system**. An inspection shaft can thus be installed quickly and economically by simply assembling in the required place. The ACO StormBrixx upper parts (1) are added to the top of the access.

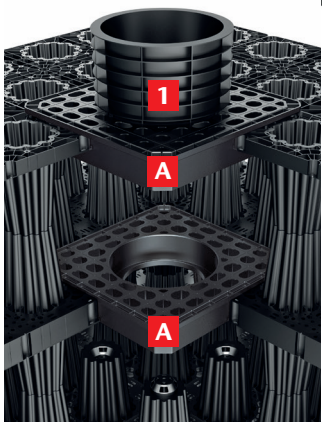
ACO StormBrixx SD:

The adapter for shaft construction (A) together with the ACO StormBrixx riser piece (1) is mounted within the overall system for inspection and cleaning of the system.



ACO StormBrixx HD:

If access points are required within the system, the adapter for shaft construction (A) can be used together with the upper part (1) as an alternative to the access chamber (B) - see page 8.



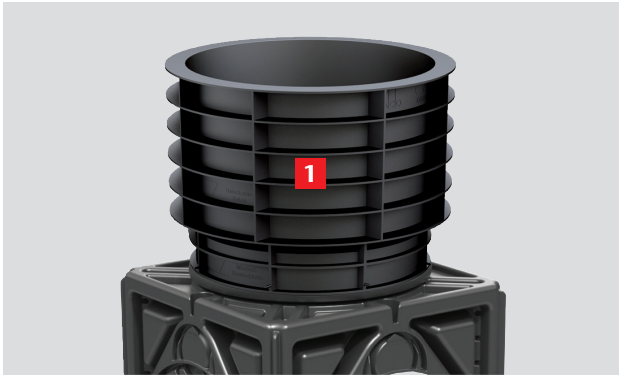
Completely installed attenuation/infiltration system with ACO StormBrixx HD:

- Shaft base or intermediate part (B) at the edge of the infiltration system
- Upper part (1)

Entrance via access chamber

For ACO StormBrixx HD, the access chamber (B) can be located anywhere within the system including the outer edge of the block attenuation/infiltration as a connection and inspection chamber. In multi-layer infiltration systems the access chamber and intermediate parts are simply assembled on top of each other.

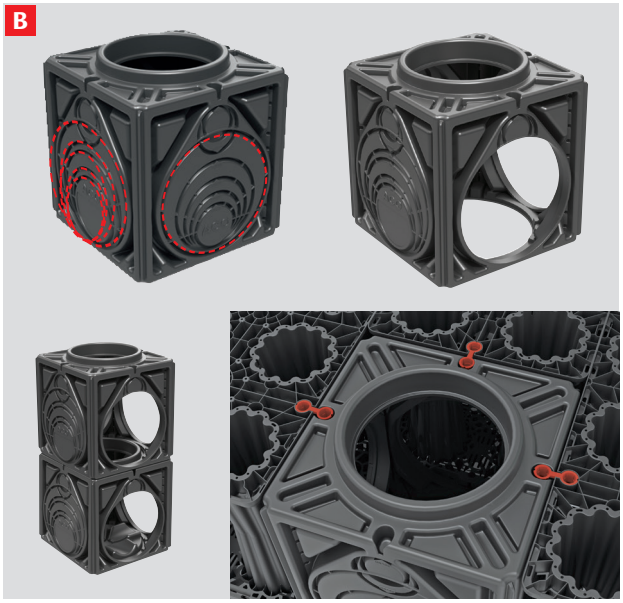
Each access chamber can be cut out on site for different pipe size connections according to the in situ requirements. It is advisable to make a predrilled hole for the saw blade. The top of the chamber is added to with ACO StormBrixx upper parts (1). The height is variable and is adapted to the ground level. An access cover rounds off the modular system.



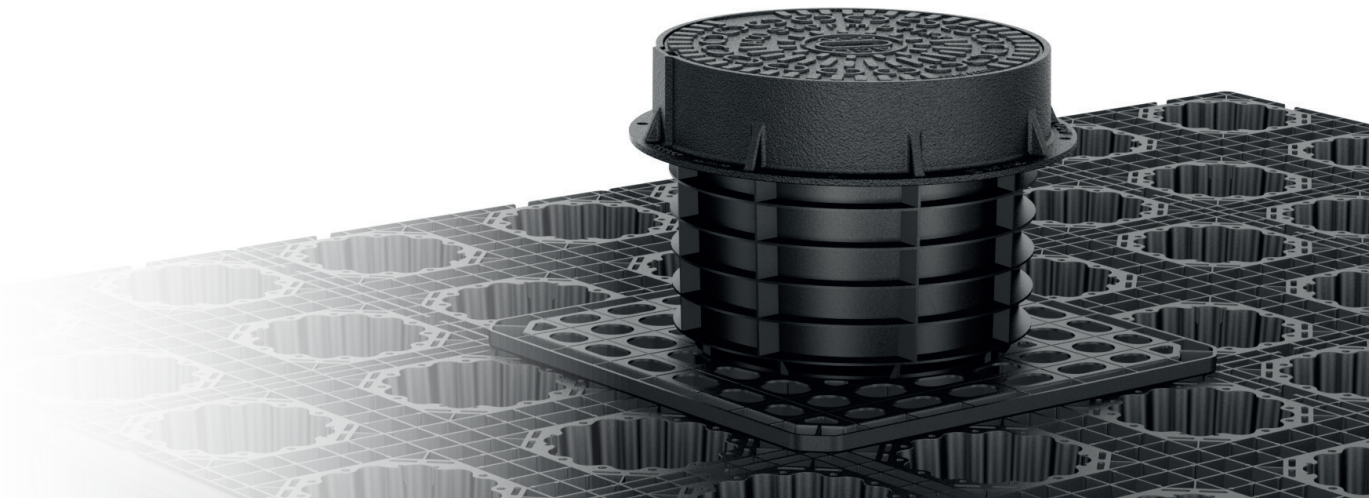
Only in conjunction with StormBrixx HD

The access chamber can be used at the edge of the infiltration system for inspection and cleaning. A lateral pipe connection DN/OD 400 can be made via this.

Access chambers are connected with individual connectors at the edge of the basic element. Do not use connectors on the underside!



Manholes



ACO StormBrixx offers options for accessing the system with a sewer camera or jetting nozzle or lance for inspection or maintenance of the block infiltration system. Shaft upper parts enable access to the StormBrixx system from the surface.

The riser pieces have a push-fit connection which can be adjusted to the longitudinal and transverse gradient on site and can be telescopically adjusted vertically (+/– 30 mm). They are watertight up to 0.5 bar.

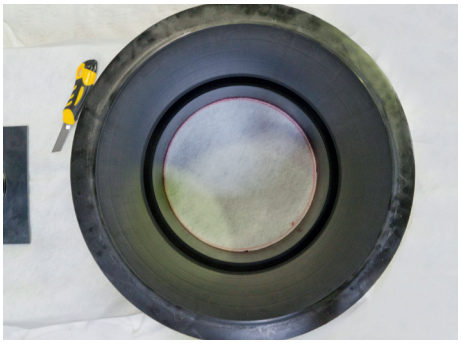
Load separation and vertical alignment of the individual components are ensured by the telescope principle.

Any settlement that occurs in the backfill area can be absorbed by the tolerance window in the telescope. The load of the shaft cover is dissipated by the support of the shaft frame in a fresh concrete bed.

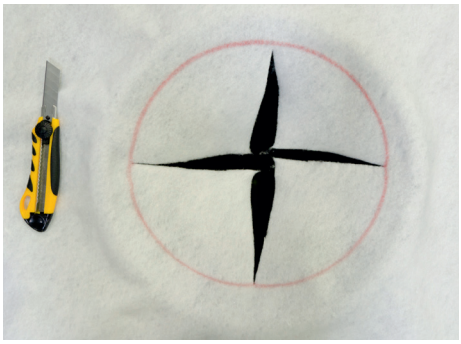
Caution

- Before inserting upper sections, remove protective film from seal and clean it
- Seals must be coated with a suitable lubricant
- Upper section must be inserted to at least the minimum insertion depth

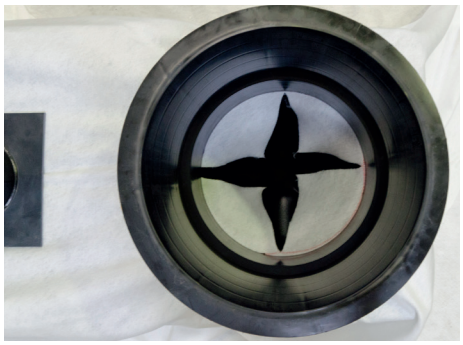
Inset the upper sections



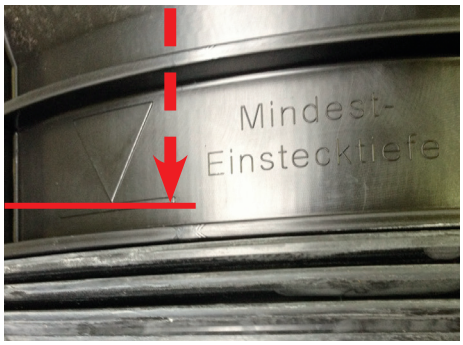
Drawing the inner diameter



Cutting a cross within the marked circle



Installing the intermediate section (= sand tight)

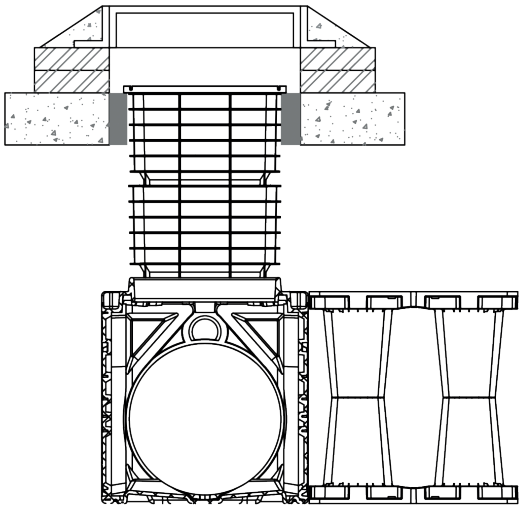


Insert to at least the minimum depth!

Inspection via different access points

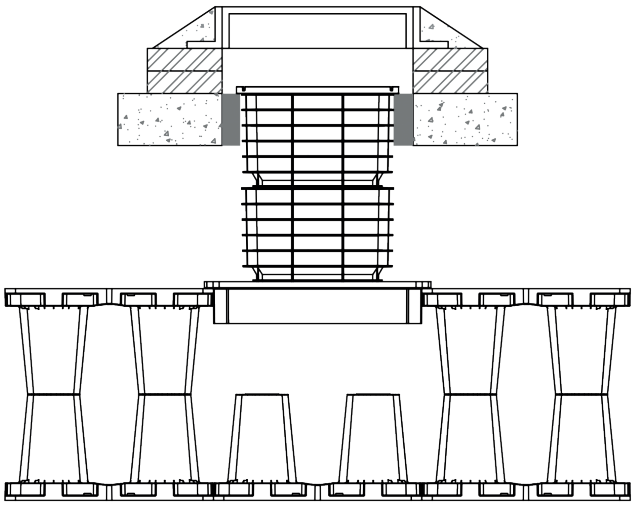
ACO StormBrixx HD

At the edge of the box via the StormBrixx upper part (inner diameter = 339 mm), in connection with the access chamber (inner diameter = 400 mm)



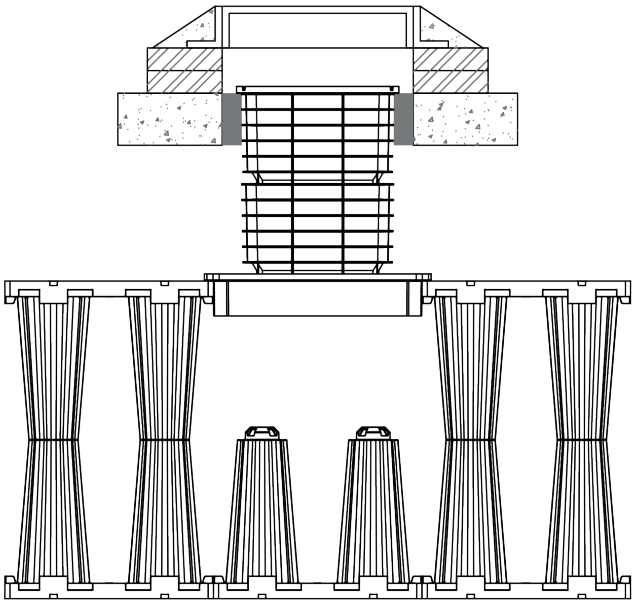
ACO StormBrixx HD

Within the box via the ACO StormBrixx upper part (inner diameter = 339 mm) in connection with the access plate (inner diameter = 400 mm)



ACO StormBrixx SD

Within the box via the ACO StormBrixx upper part (inner diameter = 339 mm) in connection with the access plate (inner diameter = 400 mm)

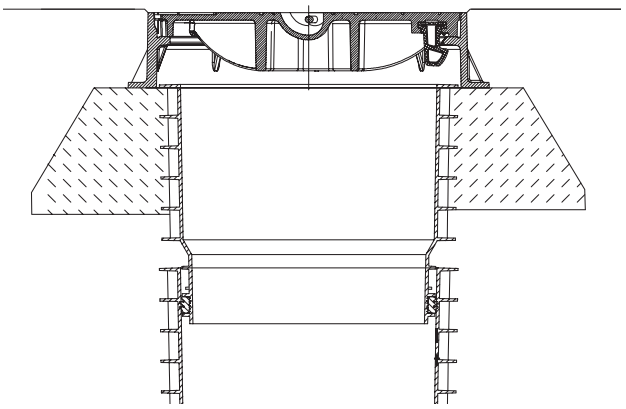


Access Covers D 400

The access cover has a maintenance free, screw-free and traffic-safe catch made from highly wear-resistant plastic (conforms to BS EN 124 / BS EN 1229, is stable at extreme temperatures, repels dirt, is self-locking and vandal-proof).

Once the cover has been put in place, it can be locked into place by stepping on it vertically on the area sitting over the frame. A concrete seating surrounding the upper section provides the load transmission for the shaft cover. A concrete seating C12/15 approx. 20 cm wide is created all the way around, as defined by BS EN 206-1, and raised by 2 cm to the highest drain upper section.

Use the inserted temporary cover/formwork to smooth off the inserted concrete flush. Then remove the temporary cover/formwork, press the frame into the wet cement base to a depth of approx. 2 cm until it is completely seated on the upper shaft section or as required for the final height.



Depth of concrete: 20 cm

Concrete quality: ≥ C12/15

- ACO Water Management
  Civils + Infrastructure
  Building + Landscape
- ACO Building Drainage
- ACO Access
- ACO Sport
- ACO Wildlife

ACO Water Management

A division of ACO Technologies plc

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