Installation and assembly instructions for the
HeitkerBloc Fertigmodule

The HeitkerBloc infiltration system is an extensive and near-surface drainage system for decentralized rainwater infiltration and retention, with a high storage capacity of around 95%.

load-bearing capacity	earth cover min.	earth cover max.	floor depth max.
LKW 12 to LKW 30 to LKW 60 to	0,60 m 0,80 m 1,00 m	2,60 m 2,40 m 1,80 m	4,20 m

When designing and approving infiltration systems, the respective official regulations must be observed. The dimensioning is carried out according to the DWA-A 138-1 worksheet, considering the rain donations from the KOSTRA Atlas of the German Weather Service. In order to avoid system malfunctions, the kf value of the in-situ soil should be determined exactly and the infiltration system should be dimensioned accordingly.

In the case of buildings with water-pressure-retaining sealing, the distance between an infiltration system and the building is not critical. The following applies to non-watertight basements: if the groundwater level is constantly below the basement floor, the distance between the infiltration system and the base of the excavation pit should not be less than 1.5 times the excavation depth, so that seepage water does not get directly into the excavation backfill area. As a rule, 3 m to buildings with basements is sufficient.

Decentralized infiltration systems should be equipped with an emergency overflow below the downpipe connection, or with an overflow to the sewage system. The distance from the infiltration system to the highest possible groundwater level should always be approx. 1.0 m. The distance to trees should at least correspond to the expected crown diameter.

In principle, every rainwater system should be preceded by a central filter shaft for long-term functional reliability and protection against dirt and blockages.

Einbauhinweise und Arbeitsschritte:

1. An excavation pit is created according to DIN 4124 (excavation pits and trenches). The dimensions of the excavation pit depend on the trench dimensions and the inflow depth or overflow height to the sewage system. A working space of 0.50 m all around and a 45° slope must be taken into account.
2. A compacted, drainable and load-bearing fine planum (paving planum) is produced horizontally without a gradient as the base of the excavation pit. The substrate must be sufficiently stable with a minimum deformation modulus (Evd) of ≥ 25MN/m². The blinding layer consists of crushed sand/chips 2-5 mm and 5 cm thick.
3. The modules are now placed on the excavation floor. When connected in series, the modules must relate to a KG pipe DN 110 or DN 160. To do this, the pipe is pushed about 10 cm deep into the connections provided on the front sides of the blocks, with the geotextile folded inwards. A good waterproofing overlap must be ensured, particularly at these penetration points, to avoid soil being washed in.
4. Then the filter shaft is set and piped with the trench. The inlet pipe is pushed about 10 cm deep into the connections provided on the front sides of the blocks, with the geotextile folded inwards. A good waterproofing overlap must be ensured, particularly at these penetration points, to avoid soil being washed in.

5. The vent/emergency overflow is important, which is placed on the upper front side of the trench, opposite the inlet/filter shaft. It must be ensured that the vent/emergency overflow is installed lower than the downpipe entry into the sewer line. As a result, the entire storage volume of the trench can be used, and during peak rainfall events, the overflow occurs at the lowest point on the site or via gutters or inlet gullies.
6. Finally, the excavation pit is filled with compactable sand up to the top edge of the terrain and compacted in layers. The infiltration modules should be backfilled evenly all around in a low layer height of approx. 20 cm, also to prevent the module from shifting. A vibratory tamper is to be used for the layered backfilling and compaction, as well as a light surface vibrator for the first top layers. From an overlap of 0.80 m, it can be compacted with standard equipment.
7. The infiltration trench may only be released for traffic from an earth cover of 0.80 m. Otherwise, the trench body must be closed off at 2 m from the trench to prevent access by construction vehicles.
8. After backfilling up to the top edge of the site, additional earth or material deposits must be excluded above the trench and in a radius of approx. 4.00 m so that the static load-bearing capacity values are not exceeded. This also applies to mobile crane vehicles or other loads that may not be positioned in the trench area during the construction phase. Otherwise, heaps of earth plus the trench cover must not exceed 3.40 m.

In the case of special installation situations, we ask for approval and installation approval from the manufacturer.