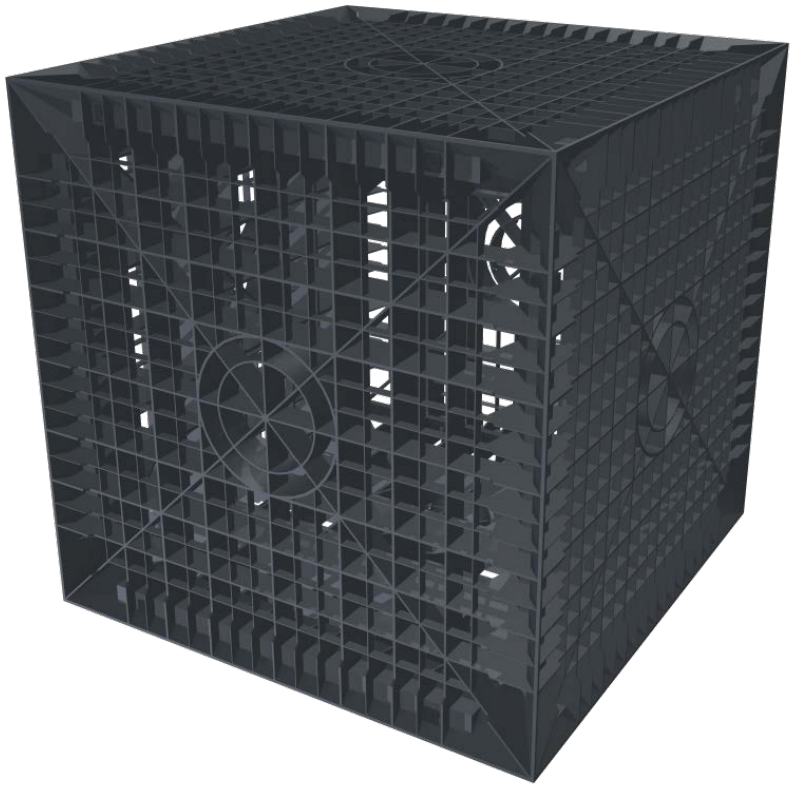
GreenLife



Installation instructions
Percolation cube 205 l

www.greenlife.de

GreenLife GmbH
D-19057 Schwerin

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Dear customer,

Congratulations on your purchase of this GreenLife product and thank you for the confidence you have placed in us.
Please check the goods on receipt for any transport damage.
The manufacturer or the supplier is not liable for transport damages, but the carrier. Transport damages reported after receipt of goods cannot be claimed. If the packaging is damaged, please unpack immediately in the presence of the deliverer in order to determine possible damages, which must be reported to the carrier in writing. The goods must remain with the buyer until the transport damage has been clarified.
Before installing, electrically connecting and/or operating this product, it is absolutely necessary to read this manual carefully and completely and observe all safety instructions.
Please keep this manual in a safe place for future reference.
For questions and comments please contact us at

service@greenlife.info

at your disposal.

With kind regards

Your GreenLife Team

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Contents

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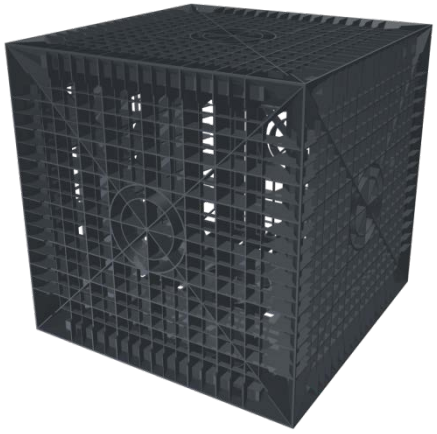
Scope of delivery

- GreenLife seepage cube 205 l capacity,
  consisting of 6 polypropylene side panels
- easy-to-assemble kit
- Connection to KG pipe DN 110 or DN 160
- Dimensions (cm): 60 x 60 x 60 (W x L x H)
- incl. 24 pins / connecting pins
- Geotextile (optional)
- Car accessible (please observe installation instructions)



Safety and installation instructions

The percolation cubes were developed especially for use in rainwater retention and infiltration and also for treated wastewater.

When selecting the percolation cubes, care must be taken to ensure that they are not damaged. Damaged seepage cubes must not be installed because the required compressive strength of the percolation cube cannot be given due to the damage. Changes to the blocks result in static changes and are therefore not permitted.

The percolation cubes are combustible. Therefore contact of the seepage cubes with open flames and hot metallic objects should be avoided.

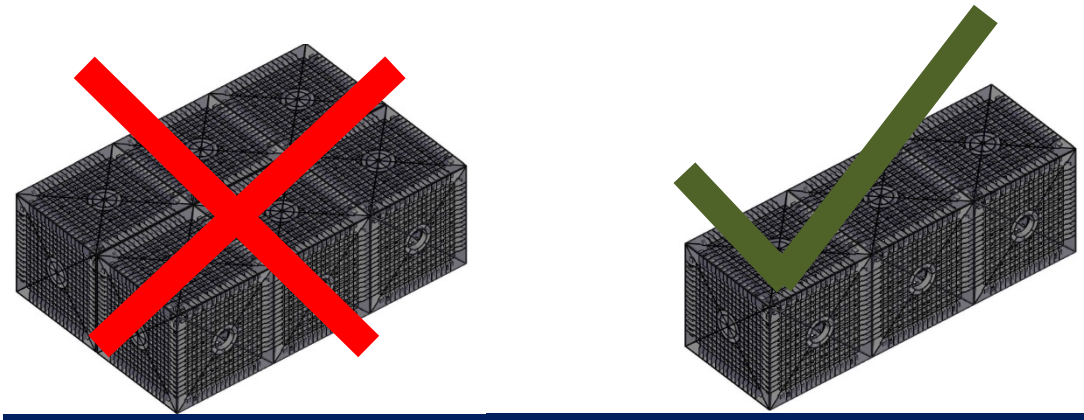
The rainwater retention and infiltration system is usually subject to notification or approval. Therefore, please contact your responsible authority.

When installing the seepage cubes, it must be ensured that the subsoil is level and sufficiently compacted. If several seepage cubes are installed, care must be taken to ensure that the seepage cubes lie close together so that no gaps can form between the percolation cubes.

After the percolation cubes have been placed in the pit, they must be covered with GreenLife geotextile. The geotextile prevents soil from penetrating into the seepage cube. When using several geotextile sheets, an overlap of at least 50 cm is recommended.

Installation note for car trafficable surfaces

For areas accessible to cars, the percolation cubes are set up in a line one behind the other without any space in between. No seepage cubes may be set up next to each other!



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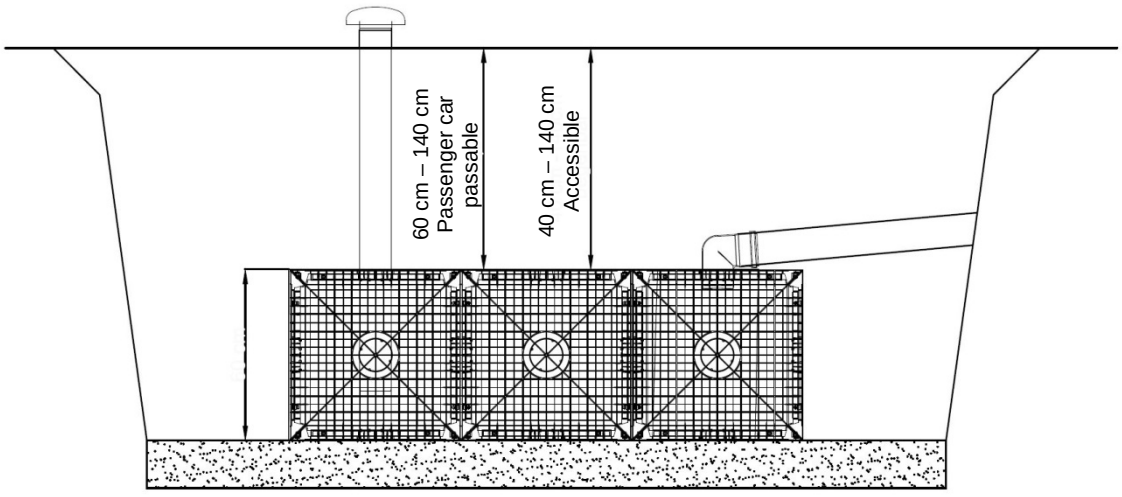
Installation Instructions

- According to DWA A-138, the minimum distance from the lower edge of the percolation cubes to the highest groundwater level is one meter. The distance to the neighbouring property should be at least 3 metres.
- The installation is based on the regulations for occupational safety and accident prevention
- For proper compaction, the bottom of the excavation pit should exceed the dimensions of the percolation cubes appropriately
- The seepage cubes must be installed close together (avoid gaps!)
- It is recommended that a GreenLife shaft or GreenLife pre-filter for infiltration is installed in front of the seepage cubes to filter / settle contaminants.
- The seepage cubes must be completely covered on top and sides with GreenLife geotextile (class 3 with at least 200 g/m²) to prevent soil from penetrating the percolation cubes.
- To ventilate the system, a ventilation pipe should be laid from the last percolation cube KG pipe to an aerator. Please pay attention to the gradient to the percolation cubes
- The percolation cubes should have a soil cover of 40 - 140 cm.

Trafficable areas with road construction (car traffic, max. 2.2 t axle load)	min. Earth cover h 60 cm
	max. ground cover h 140 cm
Green area (max. single load 250 kg)	min. Earth cover h 40 cm
	max. ground cover h 140 cm



Substructure: 8 - 10 cm clean layer of round grain gravel
Grain size: 8/16 mm smooth stripped

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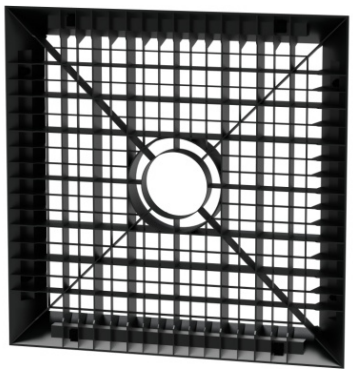
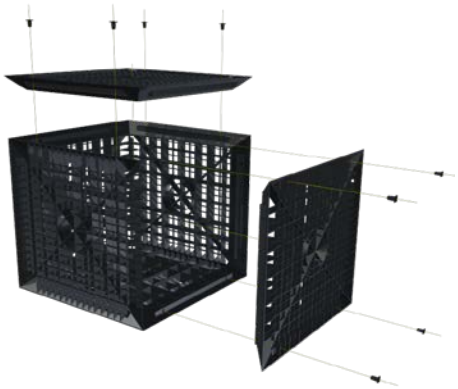
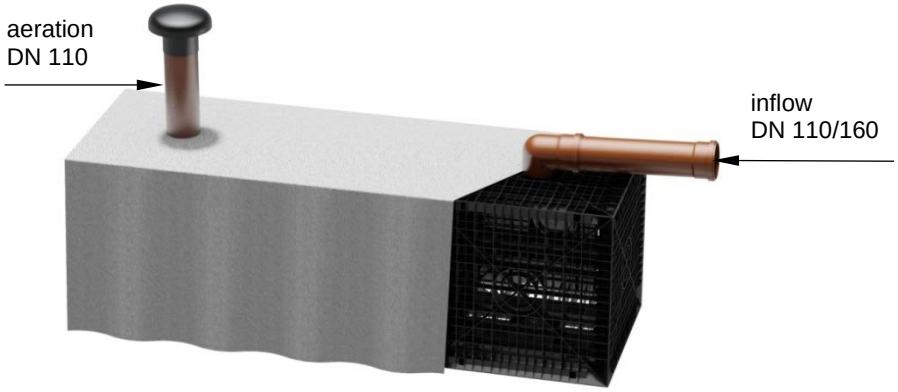
Assembly instructions

1. break out pins (24 pieces) a Diagonal cutter is well suited.
2. connect the pins. Each side part is connected with 4 pins. If pressing in by hand does not work, use a small hammer.
3. saw out the inlet / ventilation
   Cut out the inlet and, if necessary, the aeration. It is best to use a small saw blade. Saw out DN110 or DN160 depending on the design.
4. complete view assembly
5. mounting example: Cube with ventilation and geotextile. Fold geotextile







Choice of location

When selecting a site, the following site conditions should be met to prevent damage to buildings or percolation.

The percolation system should always be planned and installed near the rainwater connection. The distance to buildings should be 1.5 x the height of the basement/foundation, whereby the pit depth depends on the planned height of the rainwater connection. Ensure sufficient distance to trees, especially to their roots (tree crown diameter = distance to the percolation system).

Dimensions of the building pit

The dimensions of the construction pit depend on the number of percolation cubes and the position of the infiltration according to worksheet DWA-A 138 or in the regulations of their country. Accessible surfaces are guaranteed with a minimum of 40 cm and a maximum of 140 cm earth cover over the infiltration. For larger construction projects, excavation pits and trenches must be constructed according to DIN 4124. We recommend a working space of 50 cm around the infiltration to be used.

Vegetation above the percolation

If you plan lawns above your infiltration system, you should lay foil on the percolation, as otherwise your lawn can dry out more quickly.

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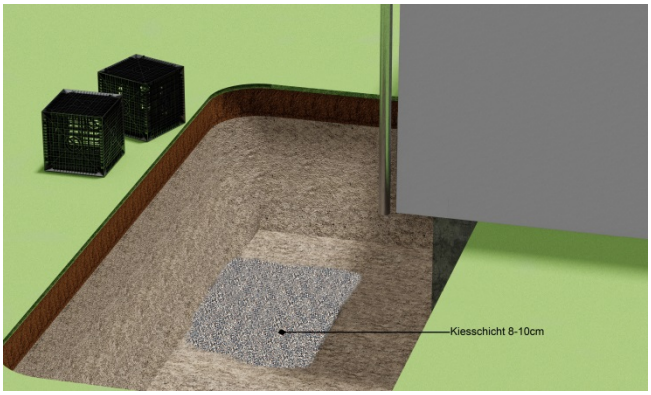
Installation percolation cube

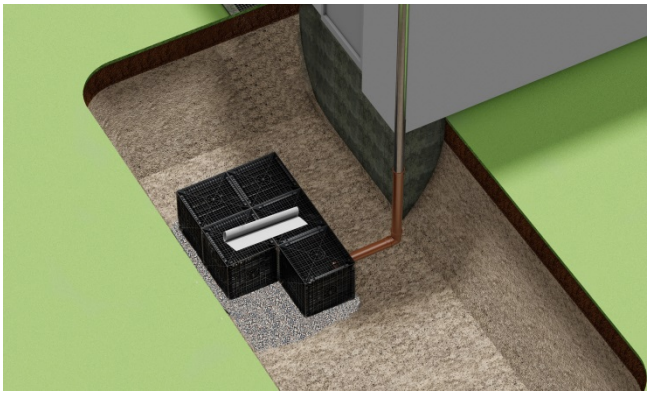
Preparation of the pit

The bottom of the pit must be horizontal and flat. Any foreign bodies must be removed from the pit. If this is guaranteed, the gravel layer can be applied. It should be about 8-10 cm. The gravel grain size is 8/16 round grain gravel. The gravel layer is smoothed.



Geotextile

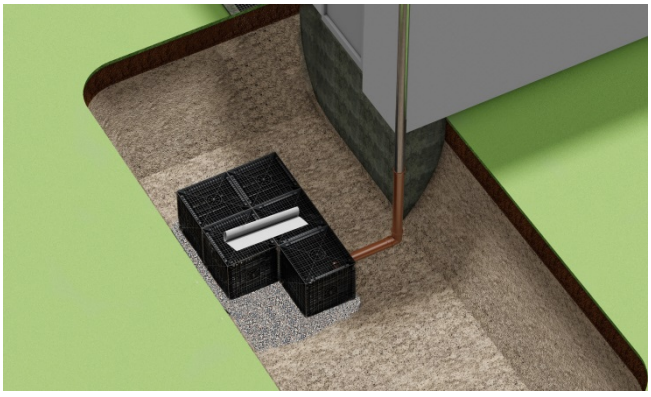
The geotextile serves to protect the infiltration from dirt and should be designed with a slight overlap for larger systems. Please avoid damaging the textile. A sufficient amount of geotextile should be laid out to completely cover the seepage cubes without gaps. The underside does not need geotextile.



Placement

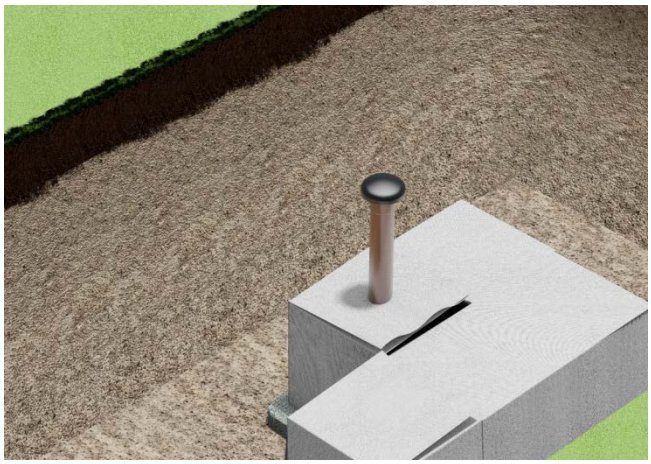
Place the seepage cubes next to each other, preferably in a row. Remember to position the seepage cubes in such a way that the inflow to the infiltration can be easily designed. Next, use the geotextile to infiltrate the infiltration. It prevents contamination and minimizes volume in the system during filling.

This arrangement does not apply to car traffic.



Connections

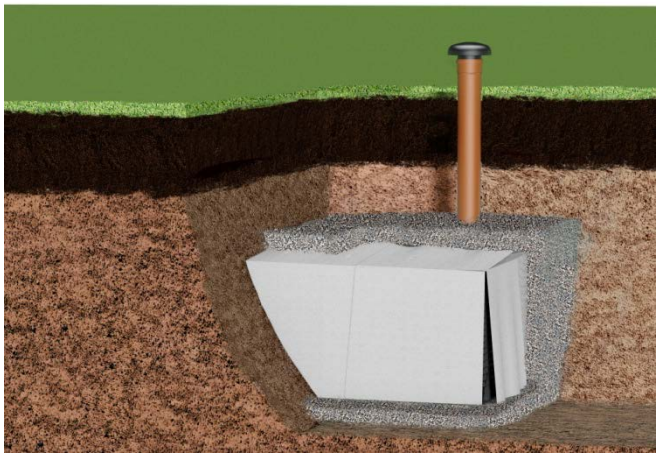
Cut out the geotextile for the inlet and outlet so that the respective pipe can be guided and connected through the cut-out in a tight fit. The inlet pipe and the aeration are pushed in approx. 15-20 cm. If necessary, the pipe can be fixed with PVC adhesive.
The vent must be attached to the top of the seepage cube.



Fill

After completion of all connection work, the excavation pit is filled in. Please make sure that:

- there are no foreign bodies in the pit
- the geotextile remains intact in any case
- the overlap is still guaranteed even during backfilling
- there is a layer of gravel around the complete infiltration, approx. 10 to 20 cm thick



From the upper edge of the percolation the excavated earth can be used. However, make sure that no stones or other sharp objects damage the geotextile. Finally, fill the pit evenly up to the ground surface in 20 cm steps and compact the individual layers.

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manual percolation test

General:

All types of percolation in general are subject to approval and have to be approved by the building authority or water board. The intensity of rain increaes in Germany from north to south.
Usually the calculation is initially based on 15 minutes rainfall. Exact rain donations can be obtained from the water management authorities. A percolation test is nevertheless advisable, since the client always acts in his own responsibility despite the approval. The percolation test determines the water permeability of the soil (Kf = sinking value).

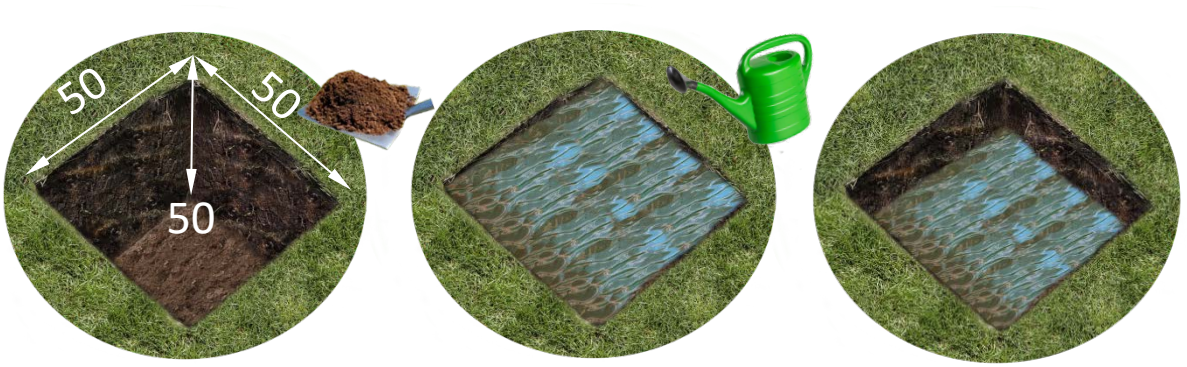
required equipment:

Spade, folding rule, tape, metal rod or wooden staff (about 70 centimeters), hammer, clock and of course water

1. digging the pit
50 cm x 50 cm x 50 cm
choose suitable place in the garden, where you assume no cables or pipes.

2. saturate the soil
Fill the pit with water and drain completely to saturate the soil
Repeat this 2-3 times.

3. measure the water level
Fill the pit again with water, this time half full.
After half an hour measure the water level.



The table data refer to a rainfall of 120 l / (ha * s) at 15 min. Duration and exceedance frequency n = 0.2 / year (5-year event). The volumes indicated give reference values with Reinhold rain rows, which should be checked according to the current worksheet A138 according to ATV-DVWK or the rules of your country.