

BIRCOparksafe®

Installation Instructions – Version 09/2024

When installing the BIRCOparksafe®, special details must be considered. Here you will find a detailed description.

To ensure proper functioning and compliance with the requirements of DIN EN 1433, the following generally applicable installation instructions must be observed:

General Instructions:

The installation examples listed below are intended for standard applications. The load class and installation location in accordance with DIN EN 1433 must be adapted to local conditions by the planner.

a) Installation guidelines for BIRCOparksafe® in asphalt or paving surfaces:

1. The placement of BIRCOparksafe® channels is done over the bituminous sealing on a concrete foundation strip at least 2 cm thick, made of C 25/30 concrete, or using a flexible adhesive mortar. Depending on static requirements, a lateral support wedge or embedding in concrete may be required – details can be found in the installation examples.
2. Start laying the channel string from the drainage point.
3. When compacting the upper structure and surface layer (asphalt/paving), make sure the channels are not damaged.
4. In paving areas, slopes, etc., adequately sized expansion joints must be provided parallel to the channel at 30 to 200 cm to compensate for horizontal forces. These expansion joints must be planned by an engineer and professionally executed.
5. In the case of shear forces, pavements must be securely connected to the rear support. The joints of the first three rows of pavement must be laid in a mortar bed and permanently sealed to prevent shear forces (e.g., thermal expansion, braking forces, etc.) from acting on the channel.
6. Expansion joints running perpendicular to the channel string must be planned by an engineer and professionally executed. They must be arranged in the adjacent pavement so that they align with the channel joints. We recommend placing them every 8 to 12 linear meters (according to DIN 18318, current version).



7. All adjacent surfaces should be permanently arranged approximately 3-5 mm higher than the top edge of the channel to prevent mechanical damage (e.g., from cleaning services) and ensure proper water drainage.
8. The channels are equipped with a safety joint at the channel connection. This can be sealed with an elastic sealing material (e.g., BIRCO SF-connect) after installation in accordance with DIN EN 1433.

b) Installation guidelines for BIRCOparksafe® in concrete decks with coating:

1. The placement of BIRCOparksafe® channels is done in a recess over a site-provided seal, adapted to the specified surface coating system. The channels are placed on a spot mortar bed or semi-dry concrete in the desired position and then filled with epoxy grout. Details can be found in the installation examples.
2. Start laying the channel string from the drainage point.
3. The channels are equipped with a safety joint at the channel connection. This can be sealed with an elastic sealing material (e.g., BIRCO SF-connect) after installation in accordance with DIN EN 1433.
4. All adjacent sealing surfaces should slope towards the channel to ensure optimal water drainage.
5. Additional regulations and guidelines Local particularities must be examined and considered by the planner. Installation must comply with the latest international/local regulations and guidelines. + The correct load class in accordance with DIN EN 1433 "Drainage channels for vehicular the correct load class in accordance with DIN EN 1433 "Drainage channels for vehicular Drainage channels for vehicular and pedestrian areas" must respected has to respected.

Additional Installation Instructions with Support Stands – Version 09/2024

When installing the BIRCOparksafe®, special details must be considered. Here you will find a detailed description.

To ensure proper functioning and compliance with the requirements of DIN EN 1433, the following generally applicable installation instructions must be observed:

General Instructions:

The installation examples listed below are intended for standard applications. The load class and installation location in accordance with DIN EN 1433 must be adapted to local conditions by the planner.

a) Installation guidelines for the use of support stands for BIRCOparksafe®:

1. Determine the position of the channel axis and the drainage point and lay the drainage pipes for later connection to the channel string – see **Figure 1**.



Figure 1

2. The installation of the support stands is done on a concrete blinding layer – see **Figure 2**.

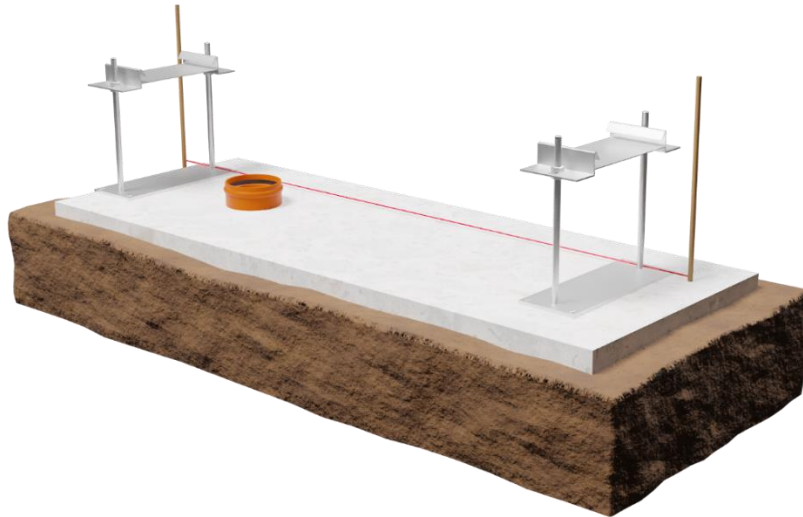


Figure 2

3. Set the starting point of the channel string depending on the drainage point (250 mm from the drainage axis to the end of the channel body – see product drawing) and stretch a guideline or use a laser on one of the threaded rods of the lower part of the support stand.
4. Place the lower parts of the support stands at 1000 mm intervals along the guideline and anchor them in the concrete blinding layer.
5. The steel reinforcement can then be installed. We recommend connecting the reinforcement to the threaded rods of the support stands to ensure better stability – see **Figure 3**.

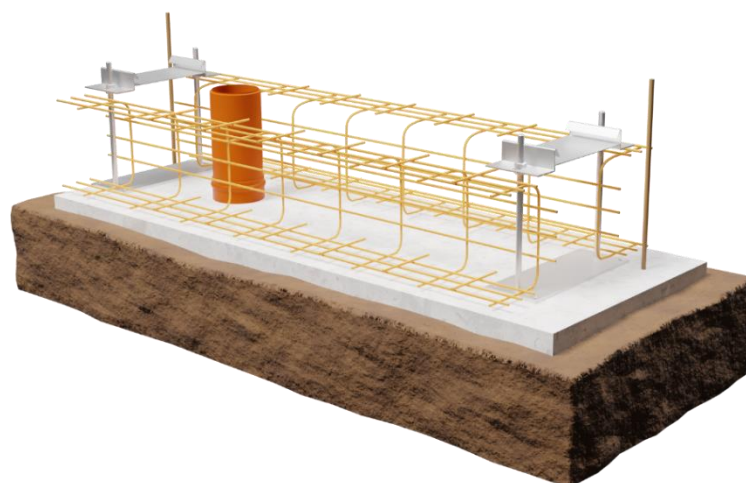


Figure 3

6. Mount the upper parts at the corresponding construction height – see **Figure 4** – and roughly adjust the height using the nuts. Then place the upper part – see **Figure 4**. We recommend using a guideline for lateral alignment and the top edge of the channel. The top edge of the channel should be approximately 3-5 mm below the final surface level. All adjacent surfaces should be arranged approximately 3-5 mm higher than the top edge of the channel to prevent mechanical damage (e.g., from cleaning services) and ensure proper water drainage.

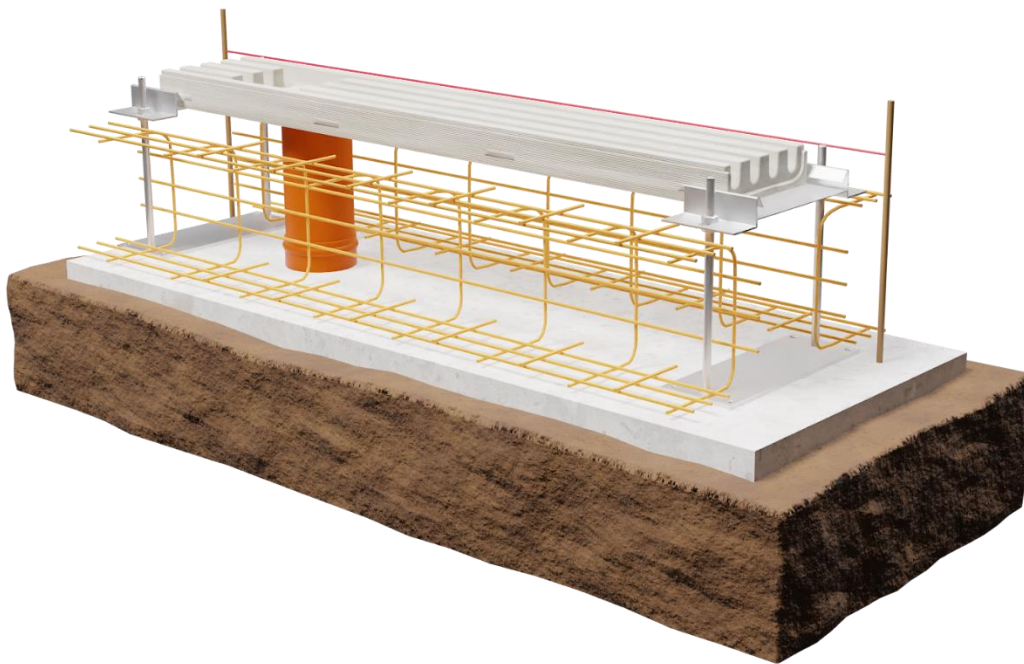


Figure 4

7. Begin laying the channel string from the drainage point and connect the drainage pipe.
8. Align the channels both vertically and horizontally using the nuts or screws and fix them in the correct position on the support stands to prevent floating.
9. It is recommended to tape the exterior channel joints to prevent lateral ingress of concrete slurry, unless the sealing of the safety joint is performed. End caps are to be installed prior to the concreting process.
10. If necessary, cut off the excess threaded rods of the support stands and complete the channel string (e.g., with an end plate or temporary cover – article number 181181 for stiffening). Ensure that the channel system is protected from contamination during concrete pouring.

11. Pour the concrete in accordance with the applicable technical regulations and guidelines.
Transverse joints in the concrete should always correspond to the channel joints – see **Figure 5**



Figure 5