Instruction de pose Type I

The load-bearing and foundation layers must be constructed in such a way that they are frost-resistant (free composition) and comply with the 'AASHTO guide of pavement structures catalogue'and the 'PIARC guidelines' (latest version in force) or any other directive in force in your cauntry.
It is essential to ensure that the subgrade is constructed in such a way that it is free from any settlement and suitable for operational loads.
In areas subject to heavy loads (class E600 and F900), such as logistics centres, transhipment centres, sorting centres, port and airport areas, a reinforced concrete base slab must be designed by a competent engineering firm according to the operating loads and the nature of the ground.
In the case of areas subject to heavy traffic in class D400, we recommend a type of installation identical to class E600 with a reinforced concrete base defined by a competent design office.

All surfaces (except paving stones):

For optimum protection of the channel, adjacent surface coverings must protrude by 3 to 5 mm above the upper edge of the channel on a permanent basis. (During road construction, no vehicles, e.g. pavers or compactors, should come into contact with the channel or its rebate. The same applies during normal operation, with vehicles crossing the channel)..

Paving-type covering :

All adjoining pavement surfaces must run permanently at a level of approximately 3 to 5 mm higher than the upper edge of the channel. In order to achieve this, we recommend laying the first two to three rows of block paving or paving slabs in a mortar bed. Because there is no concrete encasing, the surfacing can run right up to the channel. In the case of block paving or paving slabs being used as the adjoining surfacing, a durable sealing joint of some 10 mm must be established between the channel and the surfacing. The joints between the first two to three rows of the block paving or paving slabs must be sealed durably in a tight and impermeable manner. It must be ensured that horizontal forces, which may result from the expansion or shifting of the pavement, have no impact on the two to three rows of pavement set in the mortar bed.

Expansion joints :

Expansion joints in the construction parts adjoining the channel must be planned on the basis of engineering considerations. BIRCO recommends arranging expansion joints parallel to the channel, at a distance of approximately 1m – 2m from the channel line. Expansion joints running transverse to the channel line must be arranged so that they run through a channel joint. We recommend arranging them every 8 to 12 metres (in accordance with DIN 18318, valid edition). The expansion joints (e.g. PE foam sheets) must cover the total cross-sectional area of the channel, as well as the full area of the concrete base and the lateral concrete encasing.

[*] Jointing Information :

You will find detailed jointing information under www.birco.de

Bolt Connection Information :

The positioning of the screws is done diagonally to optimize their adjustement and their tightening. The recommended tightening torque moments for the grid securing screws is as follows
M12 = 60 Nm,
The bolts must be re-tightened at regular intervals.

Installation Instructions :

The installation direction of the channels is against the flow direction.

The installation of the channel string begins with the outlet (drain box/channel with a hole).
The highest channel is placed at the outlet, and then the channel string is formed with the respective smaller numbered channels.
Only after the installation is completed and the covers are inserted is the corresponding load class achieved.
The channels must not be driven over during the construction phase!

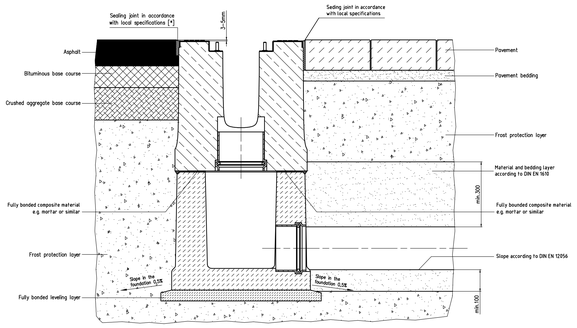
Additional regulations and guidelines :

Local particularities have to be examined and taken into account by the planner. Installation must comply with the latest international/local regulations and guidelines .

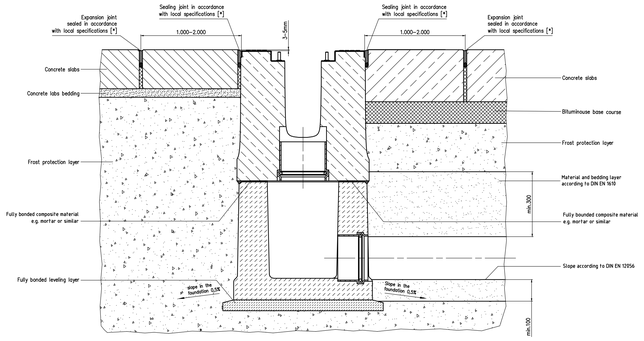
+ The correct load class in accordance with DIN EN 1433 "Drainage channels for vehicular and pedestrian areas"has to respected.

[+] Exception classe D 400 : ne convient pas en travers de d'autoroutes et de vois rapides

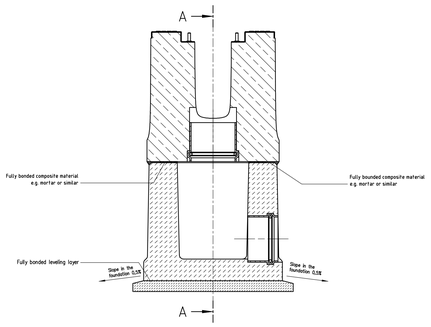
BIRCOmassiv, type I – Class A15-D400 [+]
Installation instructions for high-traffic areas.
Urban planning / Industrial construction/ Car parks



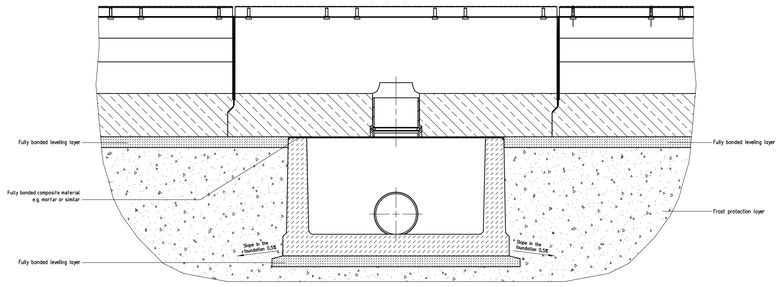
Constructed in accordance with local specifications using non-settling frost-free sub-bases
Subgrad free from settlement and suitable operational loads.



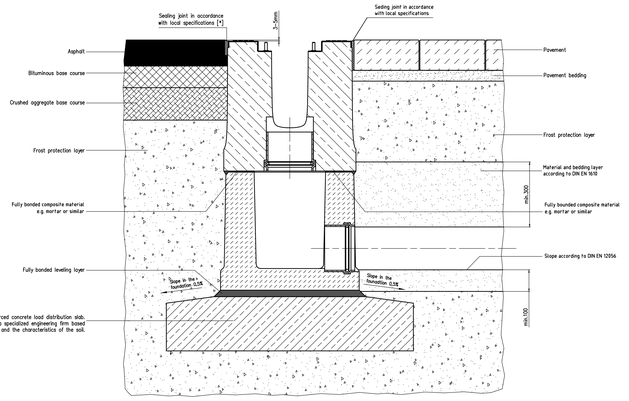
Constructed in accordance with local specifications using non-settling frost-free sub-bases
Subgrad free from settlement and suitable operational loads.



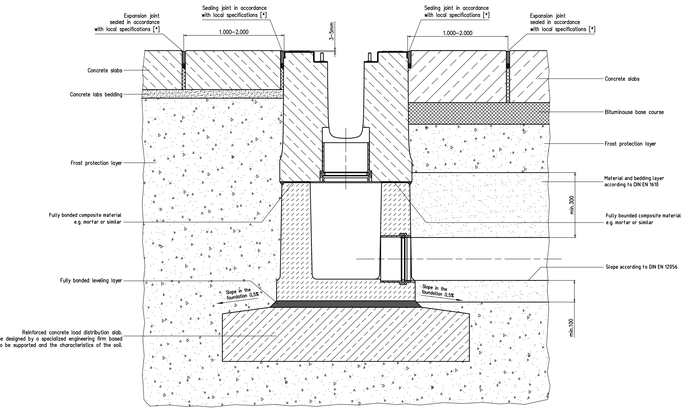
Section A-A



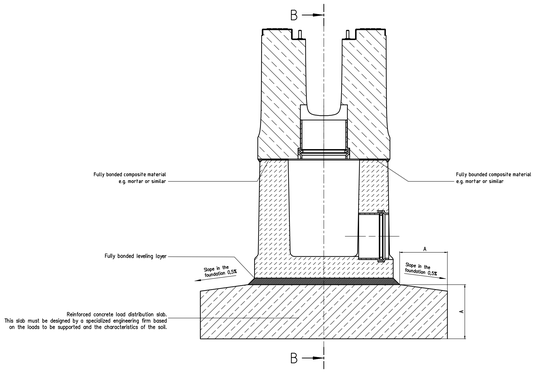
BIRCOmassiv, type I – Class E600-F900
– Class D400 [+]High-traffic areas
Installation instructions extended to areas with frequent heavy goods vehicle traffic.
Logistics centres / Transhipment centres / Sorting centres / Airports.



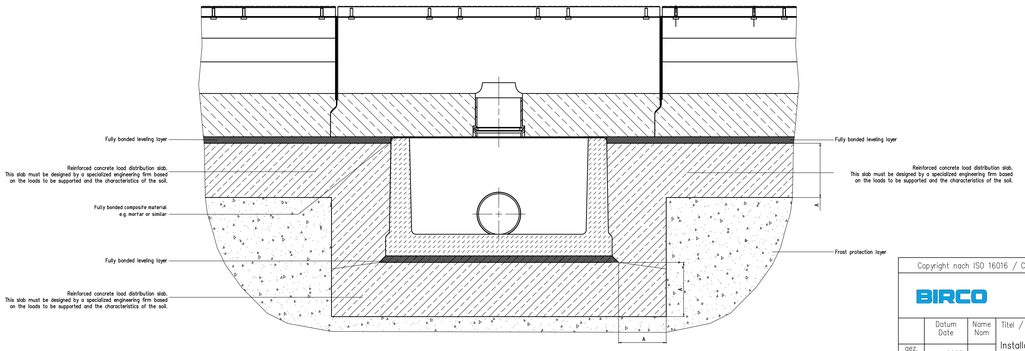
Constructed in accordance with local specifications using non-settling frost-free sub-bases
Subgrad free from settlement and suitable operational loads.



Constructed in accordance with local specifications using non-settling frost-free sub-bases
Subgrad free from settlement and suitable operational loads.



Section B-B



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BIRCO GmbH
Herrenpfädel 142
76532 Baden-Baden

	Datum Date	Name Nom	Titel / titel / title :
gez. des.	11.11.2025	mma	Installation instructions type I
Maßstab / Scale / Echelle:			BIRCOmassiv outfall unit in 2 piece
1:10			Class A 15 – F 900
CAD A 0.			
Zeichn. Nr. N° plan	L:\00_AWT\01_ACAD\AWT\Einbau\EN1433\massiv\23407_EN		