Installation Guidelines :

Generally, the compaction index below the base of the channel must be sufficient to ensure the transfer of operational loads (it must be verified by a specialized engineering office).

The dimensioning of the lateral concrete surrounding (x) must be adapted to local site conditions and equals at least 15 cm. In cases where the connection between subgrade and lateral concrete surrounding of the channel is avoided by for example by expansion joints, then dowel bars made of ø8 mm reinforced steel have to be installed every 30 cm.

The concrete grades indicated are minimum values. Requirements related to the location of installation, such as resistance to freeze–thaw with de–icing salts, must be taken into account by choosing the appropriate concrete grade in accordance with local restrictions respectively.

With complete concrete surrounded channels system, BIRCO recommends a fully sealing of the channel joints, so as to prevent damage through freeze – thaw conditions (see jointing information!)

It must be ensured that installation is performed expertly, taking into account concrete technology aspects.

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 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 :

The jointing between the male–female interlocks (groove–tongue) of the channel, as well as the filling of their safety joints, will be carried out with SF–connect sealent or equivalent after the installation of the channels.

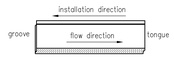
Areas of application: Adhesion of concrete, clinker, steel, stainless steel, aluminium, polyester (GFK), PVC, acrylic, polystyrene, glass, wood.

Properties :

Coated bases must be inspected in advance for adhesion and compatibility. The hardening period depends on the temperature and moisture. Higher temperatures reduce the drying period time.
SF–Connect does not contain solvents, isocyanate or silicones and does not require special warning labelling. Prior to beginning the work, it is necessary to make oneself familiar with the handling and safety instructions by reading the material safety data sheet.

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.
In general, please refrain from handling the channels by lifting them through the gratings.
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!

Working Instructions :

1. Use the industrial grouting pistol (item code 608500) to apply the sealant to the channel joint / safety seam.
2. Prior to applying the sealant to the safety joint, clean the channel end / safety seam and remove separating agents, dust, soiling, oil and other residues that could inhibit adhesion.
3. Wear protective gloves and eyewear when conducting the work.
4. Insert tubular bag (600 ml) into the industrial grouting gun.
5. Inject SF–Connect into joint.
6. Then smooth out the channel joint / safety seam surface with a jointer or putty knife that has been dipped in a soap solution.
7. Allow material residue to dry. Dried residue can be disposed of as residual waste.

Bolt Connection Information :

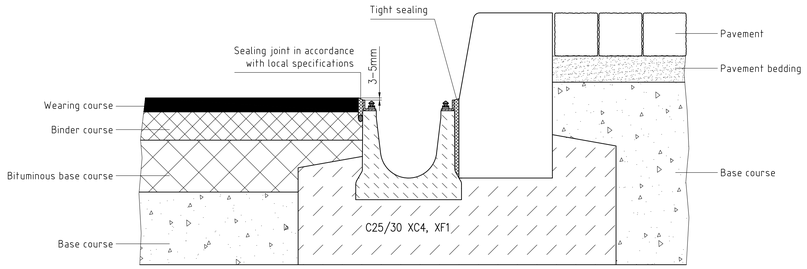
The positioning of the screws is done diagonally to optimize their adjustement and their tightening.
The recommended tightening torque moments for the grid securing screws is a follows:
M8 = 25 Nm.
The bolts must be re–tightened at regular intervals.

Additional regulations and guidelines :

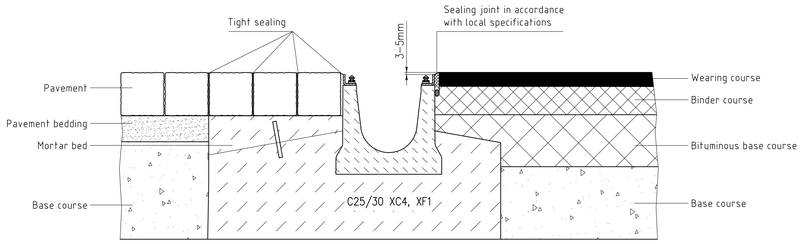
Local particularities have to be examined and taken into account by the planner. Installation must comply with the latest internationel/local regulations and guidelines .

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

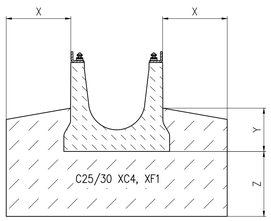
BIRCOlight DN 100/150/200 AS triloc, type M class A 15 – C 250



Constructed in accordance with local specifications using non–settling frost–free sub–bases (E.g. RSTO)

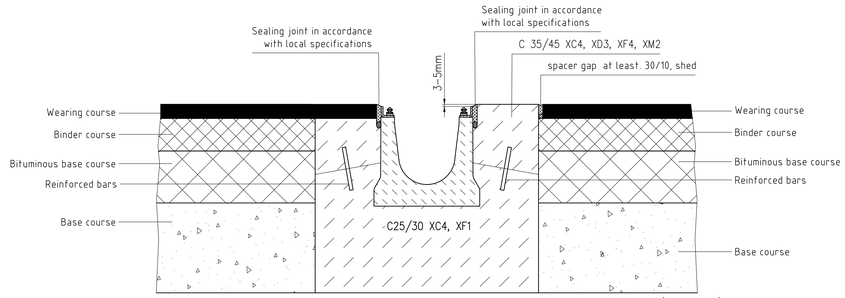


Constructed in accordance with local specifications using non–settling frost–free sub–bases (E.g. RSTO)

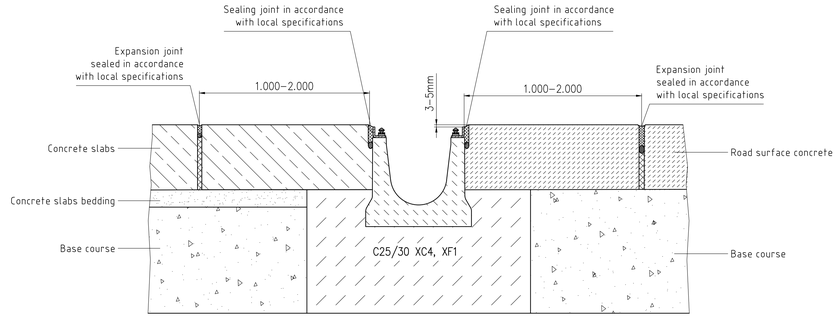


Load–class	Nominal width	X [mm]	Y [mm]	Z [mm]
A 15 – C 250	100	≥100	≥100	≥150
	150	≥150	≥100	≥150
	200	≥150	≥100	≥150

BIRCOlight DN 100/150/200 AS triloc, type M class D 400 / E 600



Constructed in accordance with local specifications using non–settling frost–free sub–bases (E.g. RSTO)



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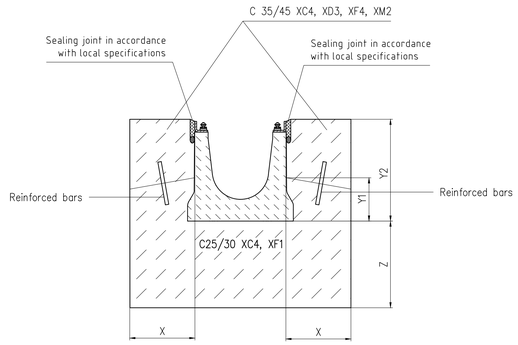

Load–class	Nominal width	X [mm]	Y1 [mm]	Y2 [mm]	Z [mm]
D 400 – E 600	100	≥150	≥100	Bauhöhe Rinne + 5mm	≥200
	150	≥150	≥100	Bauhöhe Rinne + 5mm	≥200
	200	≥150	≥100	Bauhöhe Rinne + 5mm	≥200

The installation of the drain box must be carried out in the same manner!

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	Datum Date	Name Nom	Titel / titel / title :
gez. des.	10.10.2025	mma	Instalation instruction type M
Maßstab / Scale / Echelle: 1:5			BIRCOlight DN100/150/200 AS triloc
			class A 15 – E 600
CAD A 0.			
Zeichn. Nr. N° plan	L:\00_AWT\01_ACAD\AWT\EINBAU\EN1433\light\NW100_150_200AS triloc\21114d_EN		