

Installation Guidelines

The planum is to perform settlement-free so that the expected loads can be derived without damaging the components. For changing substrates or substrates with a lower degree of compaction, an additional foundation must be designed.

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 DIN 1045-2 or DIN EN 206-1 respectively.

BIRCO recommends fully sealing 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 to 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](http://www.birco.de)

Bolt Connection Information:

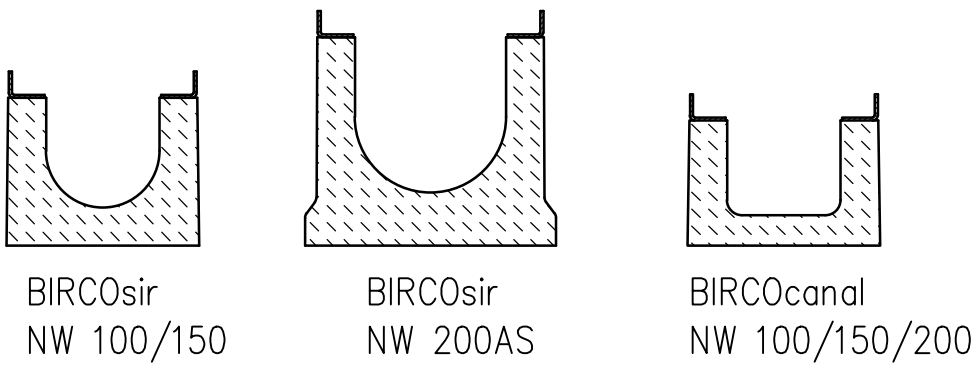
For screw fastening of the gratings, torque moments are to be set at M12 = 60 Nm, M16 = 100 Nm. The bolts must be re-tightened at regular intervals.

Additional regulations and guidelines

Local particularities have to be examined and taken into account by the planner. Installation must comply with the latest international/local regulations and guidelines .  
+ The correct load class in accordance with DIN EN 1433 "Drainage channels for vehicular and pedestrian areas" has to be respected.

[+] Exception D 400: not for installation across the roadway in highway and expressways

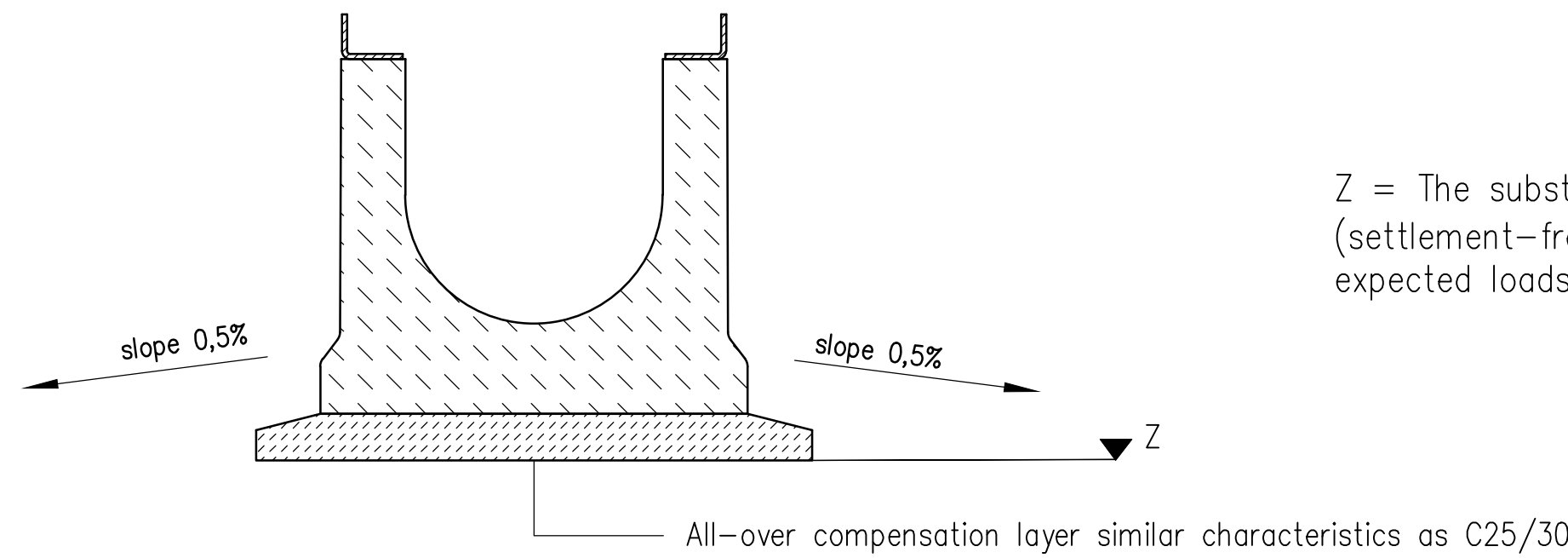
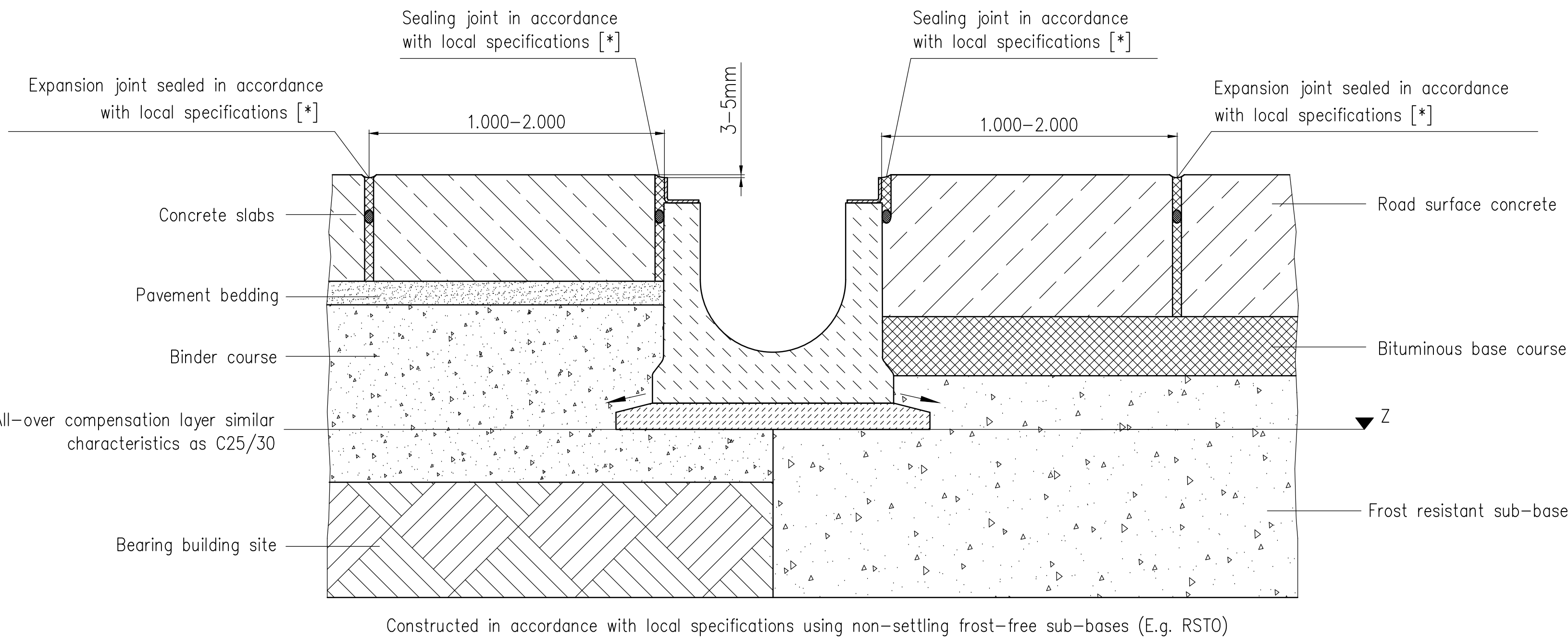
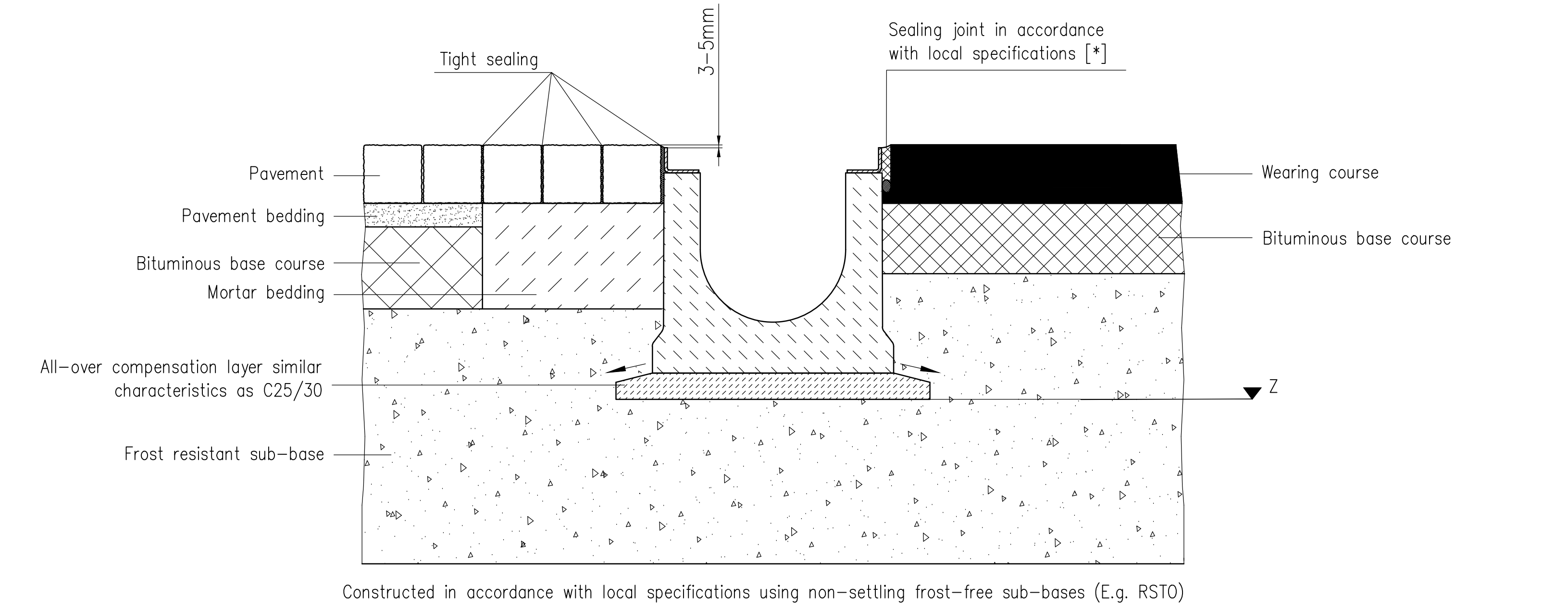
channel cross section



Presentation with BIRCOsir NW 200AS  
(s. channel cross section)

BIRCOsir NW 100 / 150 / 200AS, Type I – load class A15 – C250

BIRCOcanal NW 100 / 150 / 200, Type I – load class A15 – C250

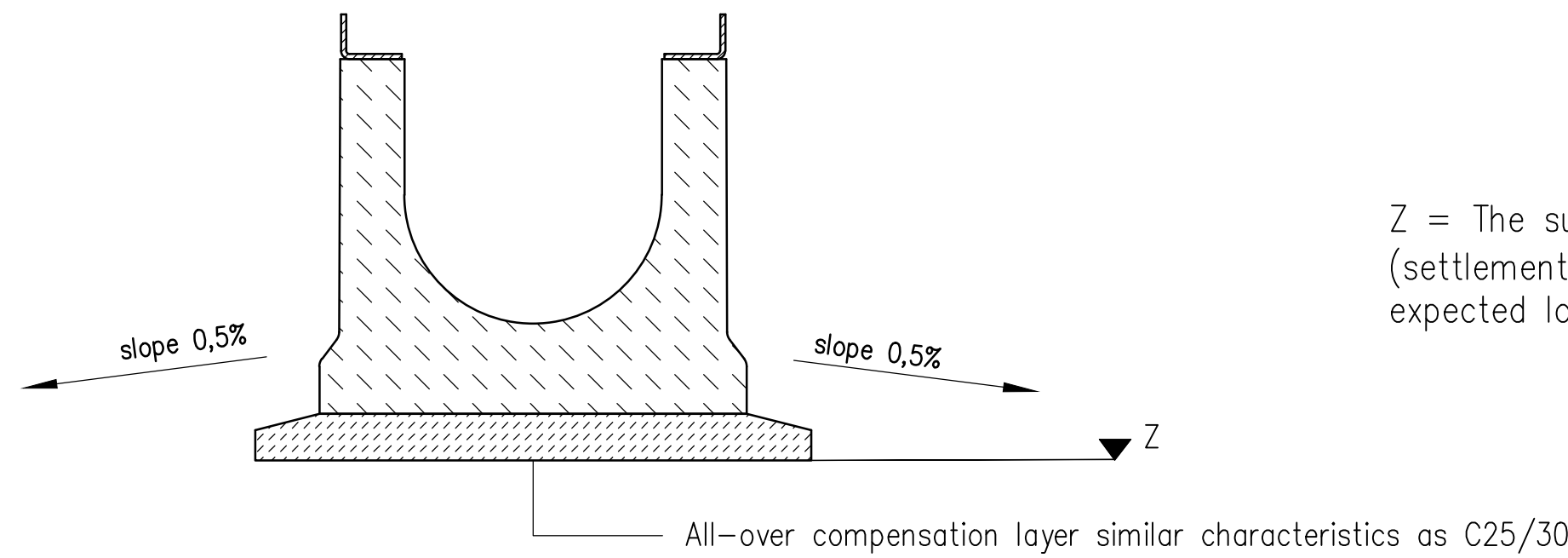
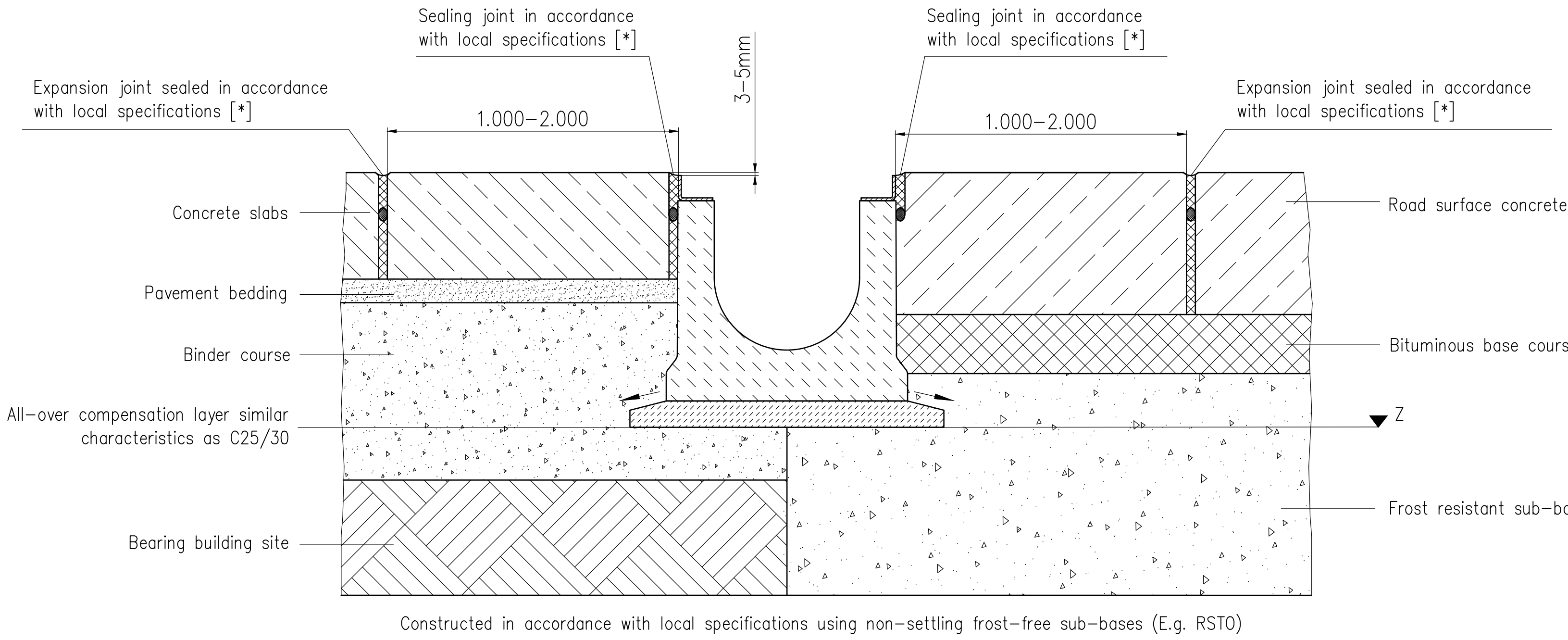
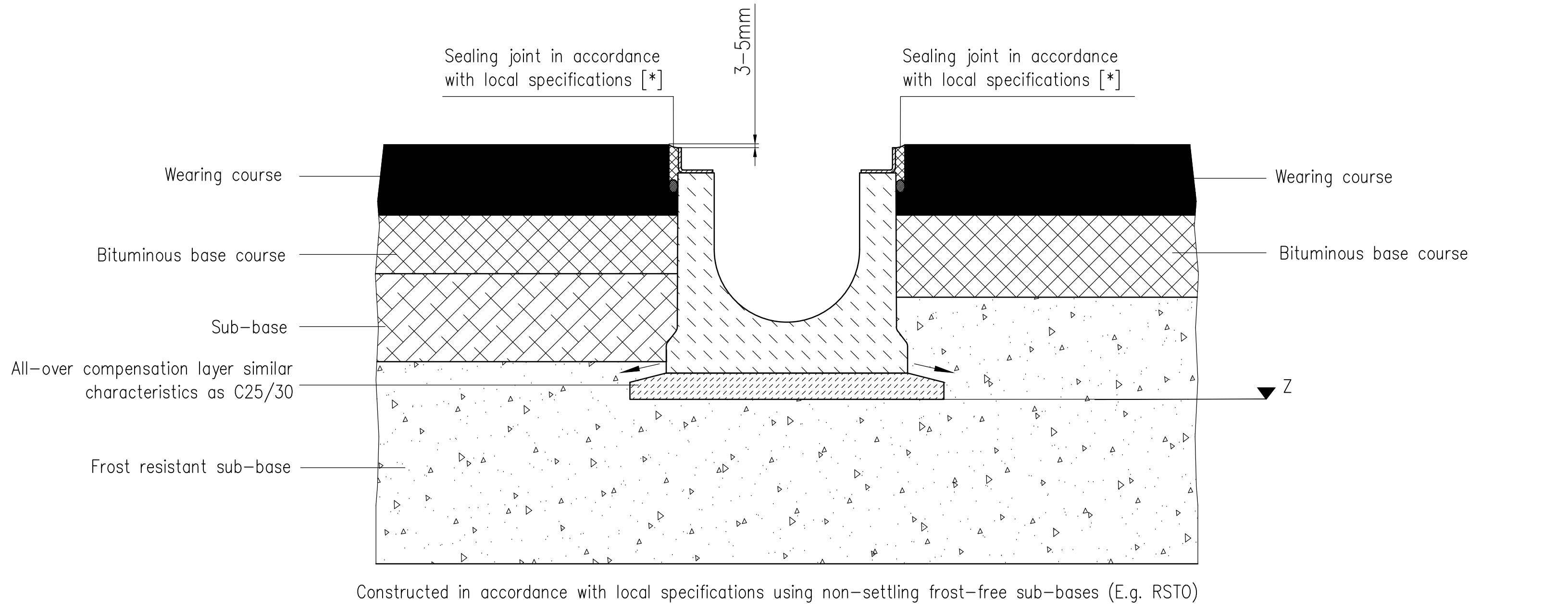


Z = The substructure must be designed long-lasting stable (settlement-free), in order to ensure the transfer of the expected loads without damage.

BIRCOsir NW 100 / 150 / 200AS, Type I – load class D400

BIRCOcanal NW 100 / 150 / 200, Type I – load class D400

EXCEPT for load class E 600 und F 900  
and for heavy-duty load areas exposed to frequent use  
for example logistics centers, transport hubs, maneuvering areas and aircraft pavements



Z = The substructure must be designed long-lasting stable (settlement-free), in order to ensure the transfer of the expected loads without damage.

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<b>BIRCO</b>		BIRCO GmbH Herrenpfädel 142 76532 Baden-Baden	
	Date	Nom	Article-Nr. / N° d'article :
ger	Datum	go	Installation instructions Type I
dessiné	17.04.2023		BIRCOsir NW 100 / 150 / 200 AS – class A 15 – D 400
Maßstab	/ Echelle :		BIRCOcanal NW 100 / 150 / 200 – class A 15 – D 400
1:5			
CAD: A. D.			
Zeichn. Nr.			
N° plan			J:\ACAD\Einbau\SR\24562b_EN

Presentation with BIRCOsir NW 200AS  
(s. channel cross section)