Load <u>Installation Guidelines Type M</u> BIRCOplus NW 100, Type M - load class A15 - C250 class The subgrade has to be compacted to an $EV_2 > 45 \text{ MN/m}^2$, if the concrete base has an A 15 - C 250 |≥100 |≥100 |≥150 **BIRCOplus** overlap of > 50 cm from channels end. Otherwise, it has to be compacted to an EV₂ of BIRCOlight NW 100AS / 150AS, Type M - load class A15 - C250 ≥100 |≥100 |≥150 A 15 - C 250 BIRCOlight AS ≥150 ≥100 ≥150 > 180 MN/m2, or it must be ensured that in case of heavy trucks circulation an overlap BIRCOlight NW 100 / 150 / 200AS triloc, Type M - load class A15 - C250 of > 50cm from channels end is guaranteed ≥100 |≥100 |≥150 BIRCOlight triloc 150 A 15 - C 250 ≥150 ≥100 ≥150 The dimensioning of the lateral concrete surrounding (x) must be adapted to local site BIRCOsir NW 100/150/200AS, Type M - load class A15 - E600 [+]* ≥150 ≥100 ≥150 conditions and equals at least 20 cm. In cases where the connection between subgrade ≥150 ≥100 ≥200 100 Sealing joint in accordance A 15 − E 600 ≥150 ≥100 ≥200 and lateral concrete surrounding of the channel is avoided by for example by expansion * For heavy—duty areas see example below with local specifications [*] 200 AS ≥150 ≥100 ≥200 joints, then dowel bars made of Ø8 mm reinforced steel have to be installed every 30 cm. Installation Guidelines Type I Wearing course – Binder course 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 Bituminous binder course Reinforcing bars degree of compaction, an additional foundation must be designed. /////////////// C25/30 XC4, XF1/ Sub-base // C25/30 XC4, XF1/ cti Constructed in accordance with local specifications using non-settling frost-free sub-bases (E.g. RSTO) Stri Installation Guidelines Type M and Type I Presentation with BIRCOsir The concrete grades indicated are minimum values. Requirements related to the location stallation (s. channel cross section) of installation, such as resistance to freeze—thaw with de—icing salts, must be taken into Nominal Load Z [mm] ≥200 ≥200 ≥200 ≥200 ≥200 ≥200 ≥200 account by choosing the appropriate concrete grade in accordance with local restrictions [mm]class BIRCOlight NW 100AS / 150AS, Type M - load class D400* - E600* respectively. ≥150 ≥100 BIRCOlight NW 100 / 150 / 200AS triloc, Type M - load class D400* - E600* D 400 - E 600 BIRCOlight AS ≥150 ≥100 With complete concrete surrounded channels system, BIRCO recommends a fully sealing of * suitable for a punctual overrun D 400 / E 600 ≥150 ≥100 the channel joints, so as to prevent damage through freeze — thaw conditions (see D 400 − E 600 ≥150 ≥100 BIRCOlight triloc 150 jointing information!) ≥150 ≥100 ≥150 ≥100 It must be ensured that installation is performed expertly, taking into account concrete 150 D 400 − F 900 |≥150 |≥100 technology aspects. expended installation instructions for heavy—duty areas subjected to frequent use ≥150 ≥100 200 AS logistics centers, Transport hubs, maneuvering areas and aircraft pavements All adjoining pavement surfaces must run permanently at a level of approximately 3 to 5 C 35/45 XC4, XD3, XF4, XM2 Sealing joint in accordance mm higher than the upper edge of the channel. In order to achieve this, we recommend with local specifications [*] Sealing joint in accordance Sealing joint in accordance BIRCOsir NW 100 / 150 / 200AS, Type M - load class D400 - F900 [+] laying the first two to three rows of block paving or paving slabs in a mortar bed. with local specifications |* with local specifications [*] Sealing joint in accordance Expansion joint sealed in accordance Because there is no concrete encasing, the surfacing can run right up to the channel. In with local specifications [*] with local specifications [*] the case of block paving or paving slabs being used as the adjoining surfacing, a durable 1.000 - 2.000sealing joint of some 10 mm must be established between the channel and the surfacing. Wearing course— The joints between the first two to three rows of the block paving or paving slabs must Binder course— Concrete slabs be sealed durably in a tight and impermeable manner. It must be ensured that horizontal - Concrete slabs bedding Reinforcing bars Bituminous binder course— Reinforcing bars forces, which may result from the expansion or shifting of the pavement, have no impact Reinforcing bars — Reinforcing bars on the two to three rows of pavement set in the mortar bed. C25/30 XC4, XF1 Sub-base C25/30 XC4, XF1 Expansion joints in the construction parts adjoining the channel must be planned on the 1111111111111 basis of engineering considerations. BIRCO recommends arranging expansion joints parallel Constructed in accordance with local specifications using Presentation with BIRCOsir non-settling frost-free sub-bases (E.g. RSTO) to the channel, at a distance of approximately 1m — 2m from the channel line. Expansion (s. channel cross section) 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 BIRCOsir NW 100 / 150 / 200, Type I - load class A15 - C250 the lateral concrete encasing. [*] Jointing Information You will find detailed jointing information under www.birco.de Sealing joint in accordance with local specifications [*] Tight sealing **Bolt Connection Information:** For screw fastening of the gratings, torque moments are to be set at M8 = 25 Nm, Pavement Wearing course M12 = 60 Nm, M16 = 100 Nm. The bolts must be re—tightened at regular intervals. Pavement bedding Bituminous binder course Z = The substructure must be designed long—lasting stable slope 0,5% Mortar bedding -(settlement-free), in order to ensure the transfer of the slope 0,5% slope 0,5% Additional regulations and guidelines slope 0,5% expected loads without damage. Local particularities have to be examined and taken into account by the planner. All-over compensation layer similar characteristics as C25/30 Installation must comply with the latest international/local regulations and guidelines . - All—over compensation layer similar + The correct load class in accordance with DIN EN 1433 *Drainage channels for vehicular Sub-base — * characteristics as C25/30 and pedestrian areas"has to respected. Constructed in accordance with local specifications using non-settling frost-free sub-bases (E.g. RSTO) Presentation with BIRCOsir (s. channel cross section) + Installa BIRCOsir NW 100 / 150 / 200, Typ I - Klasse D400 EXCEPT for load class E 600 and F 900 and for heavy—duty load areas exposed to frequent use For example Ports, Freight company premises, Industrial halls and trade fair centres [+] Exception D 400: not for installation accross Sealing joint in accordance the roadway in highway and expressways with local specifications [*] Sealing joint in accordance with local specifications [*] Expansion joint sealed in accordance Z =The substructure must be designed long—lasting stable (settlement-free), in order to ensure the transfer of the with local specifications [*] expected loads without damage. 1.000 - 2.000Wearing course Concrete slabs Copyright nach ISO 16016 / Copyright selon ISO 16016 Bituminous binder course Concrete slabs bedding slope 0,5% BIRCO GmbH — Gravel base layer slope 0,5% -BIRCO Herrenpfädel 142 <u>Channel cross section</u> 76532 Baden-Baden Sub-base _ All—over compensation layer similar Date Nom Artikel—Nr. / N° d'article : - All-over compensation layer similar characteristics as C25/30 Installation instructions Type M / Type I gez. 26.04.2022 ga Bearing building site characteristics as C25/30 — Frost-resistant sub-base BIRCOplus — up to load class C 250 Constructed in accordance with local specifications using BIRCOlight — up to load class E 600 1:10 non-settling frost-free sub-bases (E.g. RSTO) Presentation with BIRCOsir CAD A Ω. BIRCOsir — up to load class F 900 BIRCOlight BIRC0sir Zeichn. Nr.

J: \ACAD\Einbau\EN1433\24550b_EN (s. channel cross section) NW 200AS NW 100/150