ULEFOS

BG-Filcoten® dreneringssrenner

INSTALLASJONSVEILEDNING
BG-Filcoten® ONE / ONE Urban

General notes

The following installation guidelines and examples are intended for standard use. The load class and the installation according to EN1433 must be adapted to the conditions on site by the planner. The technical rules and regulations generally known in specialist circles must be considered during installation. In special cases, contact the BG applications engineering department.

Installation guidelines for FILCOTEN® one

1. FILCOTEN® channels are to be aligned on a concrete foundation in line with the Austrian standard B4710-1 or in single-sized concrete in line with RVS 08.18.01. When the foundations are cured, channel elements have to be put in a bed of high-strength mortar of at least 2-3cm. Depending on the structural requirements, support concrete wedges on each side of the channel or concrete stretchers with steel reinforcement are required – see table and sectional views for details.

2. Start setting up the linear run at the outlet unit, ensuring that the lower part of the outlet unit is at the right height and position to connect with the sewer pipe and the linear channels. If there are several outlet units in one linear run, the lower parts of the outlet units must be installed particularly carefully at the right height and position.

3. Each FILCOTEN® one element can be connected to the previous element at either end, as the groove and tongue system allows for any flow direction. As a result, there is no flow direction arrow on the elements.

4. We recommend the use of the plug-in sealing profile at the butt joints of the channel elements. The sealing of the joints can also be created with conventional sealing materials (e.g. PU-based 1-component sealing material) in the course of the backfilling work - material description and quantity calculation can be obtained from BG applications engineering department.

5. The channel run should be protected from dirt before the cover layer is connected - e.g. by means of a foil cover. When compacting the superstructure and the surface course (asphalt, paving, concrete, etc.) the channels must not be damaged.

6. If horizontal forces occur (e.g. concrete surfaces, slopes, etc.), a sufficiently dimensioned expansion joint must be provided in the area of the roadway connection, at a distance of 30-150 cm from the gutter line.
It must be ensured that forces from temperature expansion (concrete or paving surfaces) cannot, under any circumstances, act on the channel wall. Expansion joints must be arranged and executed accordingly. This also applies analogously to cement-stabilized base layers in the superstructure. Joint inlays must be selected from suitable material. Expansion joints in the adjoining concrete surfaces running at right angles to the channel run must be arranged so that they run through a channel joint.

7. In order to prevent uncontrolled stress cracks in a concrete stretcher along a channel line, planned crack or expansion joints must be added at regular intervals, according to recognized rules of technology or the specification of a static calculation. These joints should be added at right angles (of the channel section) to the channel element joints. The number and spacing of joints also on the concrete quality and the ambient temperatures during concreting – as well as the concrete after treatment – and should be carried out according to specification.

8. If shear forces occur, paved surfaces must be installed comparable to a stretcher stone. This can be done by placing the first three rows of paving (at the channel run) in a mortar bed. The joints must be backfilled with mineral materials. Shear forces from the paved surface may not have direct impact on the channel walls (e.g. thermal expansion, braking forces, etc.). The respective technical guidelines to produce bonded or unbonded paved surfaces must be observed accordingly.

9. All adjacent surface layers should always be 3-5 mm higher than the surface of the channel to avoid mechanical damage to the channel elements and to ensure the water can drain away.

10. The same installation guidelines apply accordingly to inspection and outlet units (incl. upper/lower parts).

11. The channel system must be checked regularly (at least once a year) to ensure that it is free from dirt and functioning correctly and, if necessary, cleaned – especially the outlet unit, incl. sediment bucket.

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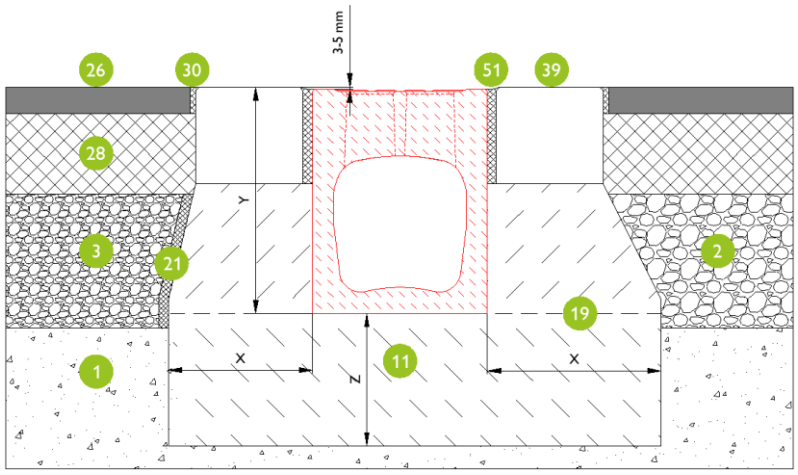
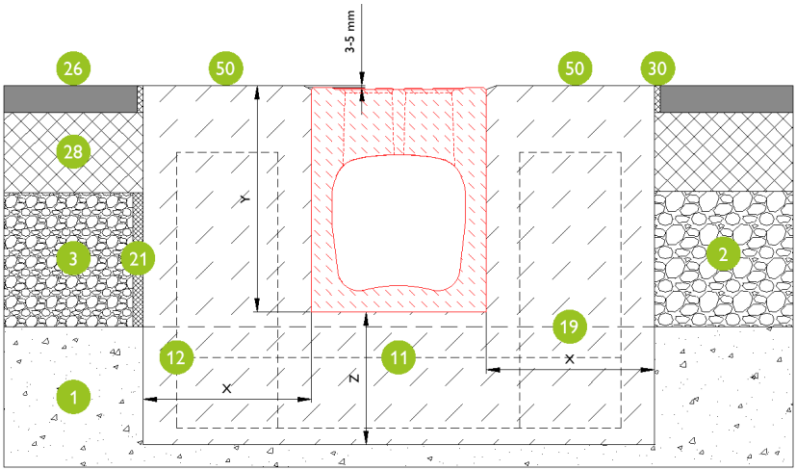
Asphalt / asphalt - Asphalt / asphalt: Kl. / cl. D - E



Asphalt / asphalt - Asphalt / asphalt: Kl. / cl. D - F

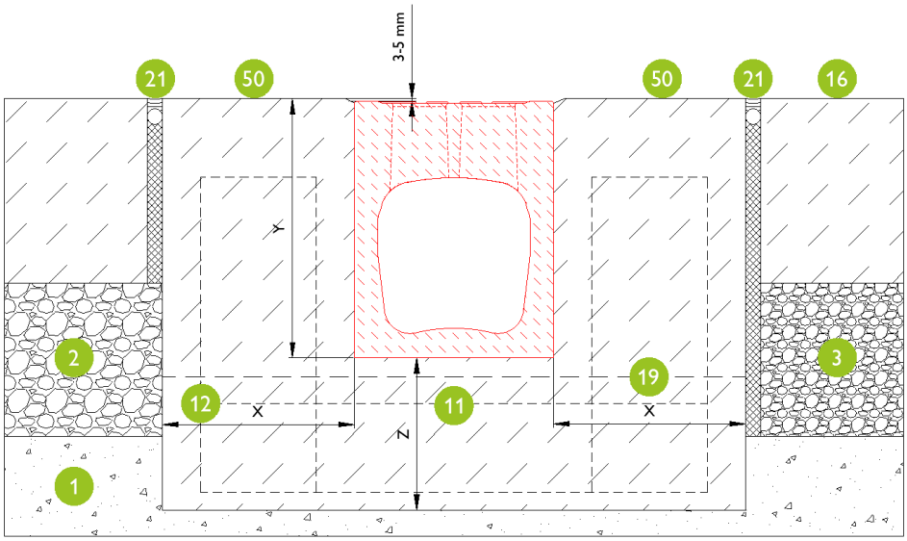


Legende / key:

1. Frostschutz-Schicht / frost protection layer
2. tragfähige Schotterschicht / load-bearing gravel layer
3. zement-stab. Schotterschicht / cement-stab. gravel layer
11. Betonfundament lt. statischer Bemessung / concrete foundation acc. to static calculations
12. Klasse E: Konstruktive Bewehrung / class E: structural reinforcement
19. Arbeitsfuge / working joint
21. Dehnfuge / expansion joint
26. Feinbelag / surface course
28. tragfähige Bitumenschicht / bitumen layer
30. bituminöses Fugenband / bituminous sealing tape
39. Großformatiger Pflasterstein / large-size paving stone
50. Quer-Scheinfuge alle 6m am Rinnnenstoß, altern. Bewehrung konstruktiv bzw. lt. Statik / transversal-concealed joint each 6m at channel joints, alternatively structural reinforcement
51. Lunker-freier Fugen-Verguss / cavity free sealing

Belastungsklasse / load class	**D 400 kN**	**E 600 kN**	**F 900 kN**
Betongüte - Fundament gem. / concrete quality - base acc. to Ö-Norm B4710-1*	≥ C 25/30	≥ C 25/30	lt. Statik / acc. to static
Breite / width: X	≥ 20 cm	≥ 20 cm	lt. Statik / acc. to static
Höhe / height: Y	Bauhöhe Rinne / channel height		lt. Statik / acc. to static
Stärke / thickness: Z	≥ 20 cm	≥ 20 cm	lt. Statik / acc. to static
Konstruktive Bewehrung / structural reinforcement	nicht erforderlich / not necessary	erforderlich / necessary	lt. Statik / acc. to static
* Betongüte ist eine Mindestanforderung und den örtlichen Anforderungen anzupassen. * Concrete quality is a minimum requirement and has to be adapted to the local conditions.			

Beton / concrete - Beton / concrete: Kl. / cl. D - F



Die Rinnenelement-Oberfläche ist beim Einbau vor Verschmutzung zu schützen.
z.B.: durch Folie beim Betoneinbau
The channel element surface must be protected from dirt during installation.
e.g.: by foil during concrete installation

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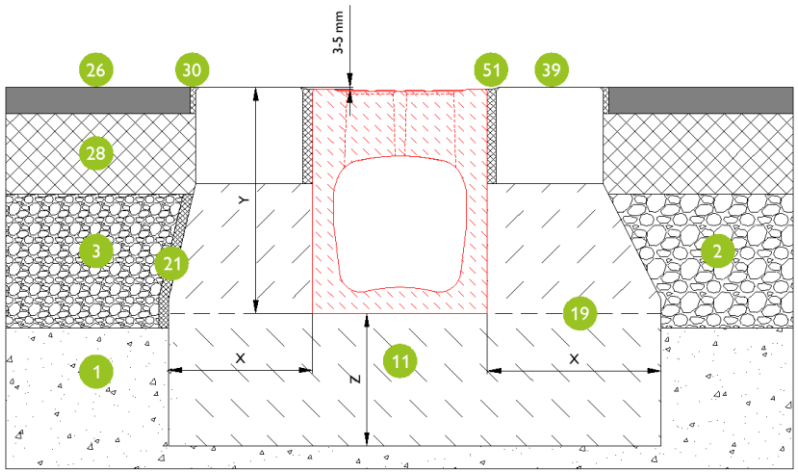
Asphalt / asphalt - Asphalt / asphalt: Kl. / cl. D - E



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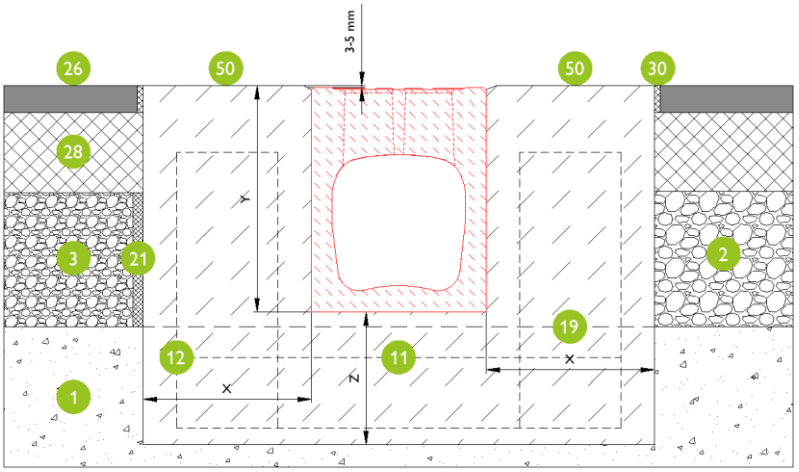

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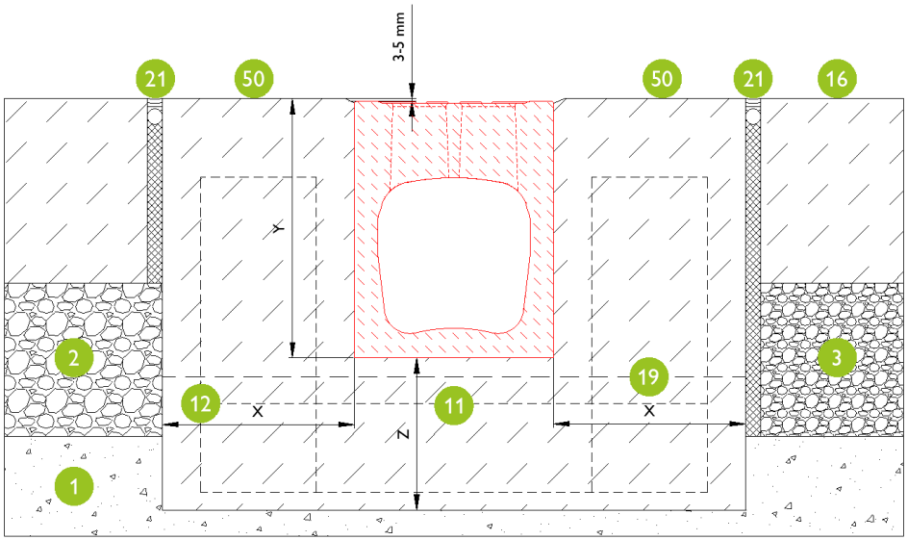

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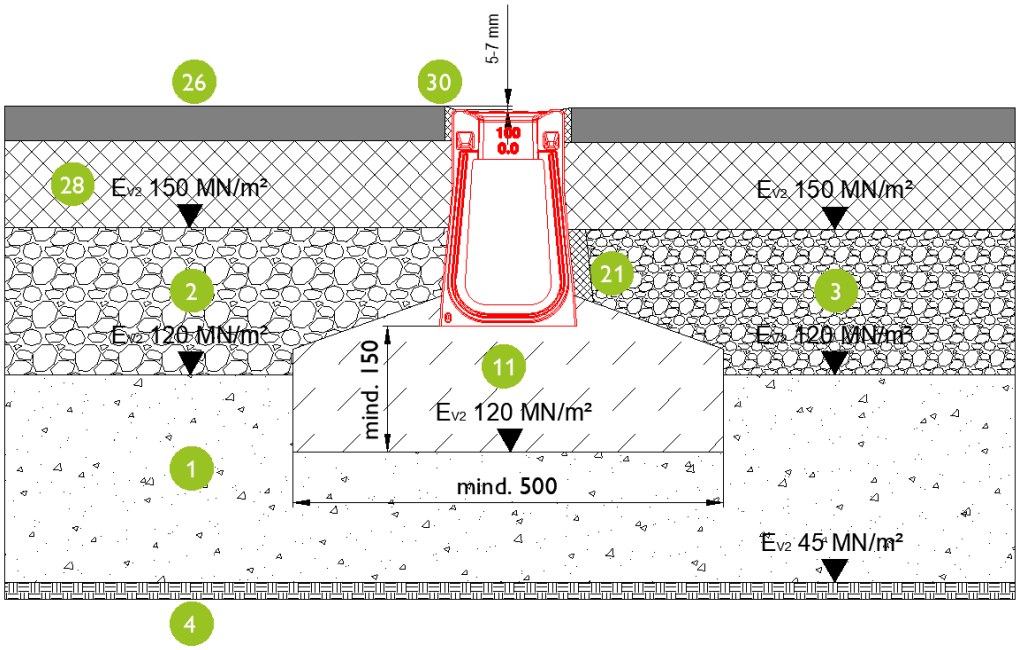
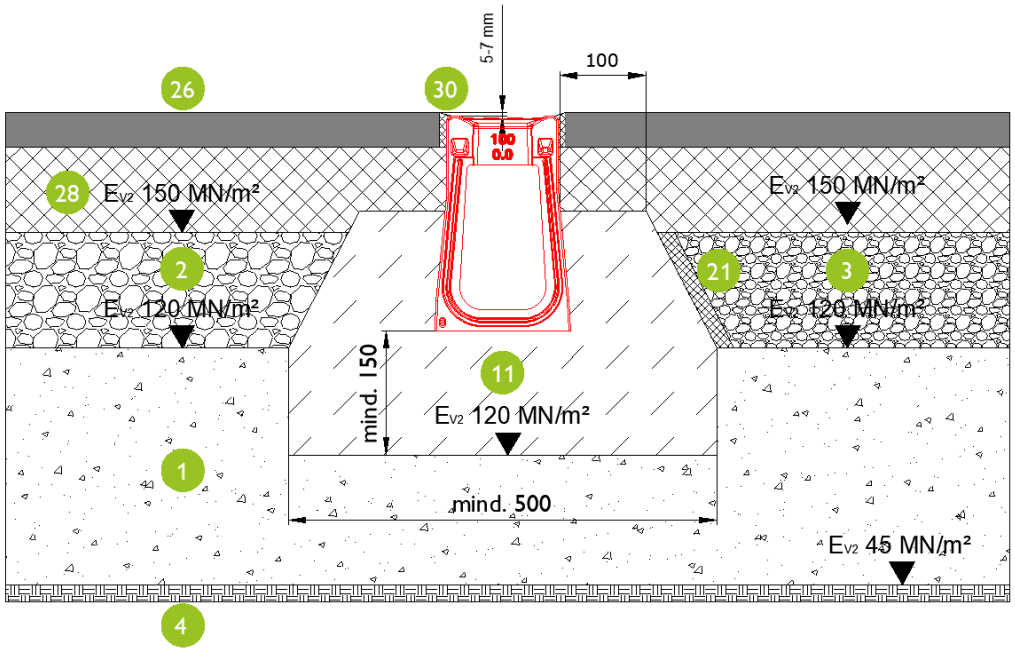
Asphalt / asphalt - Asphalt / asphalt: Kl. / cl. A – C

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



Asphalt / asphalt - Asphalt / asphalt: Kl. / cl. A - D

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



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4. Unterbau Planum / subgrade level
11. Betonfundament lt. statischer Bemessung / concrete foundation acc. to static calculations
21. Dehnfuge / expansion joint
26. Feinbelag / surface course
28. tragfähige Bitumenschicht / bitumen layer
30. bituminöses Fugenband / bituminous sealing tap

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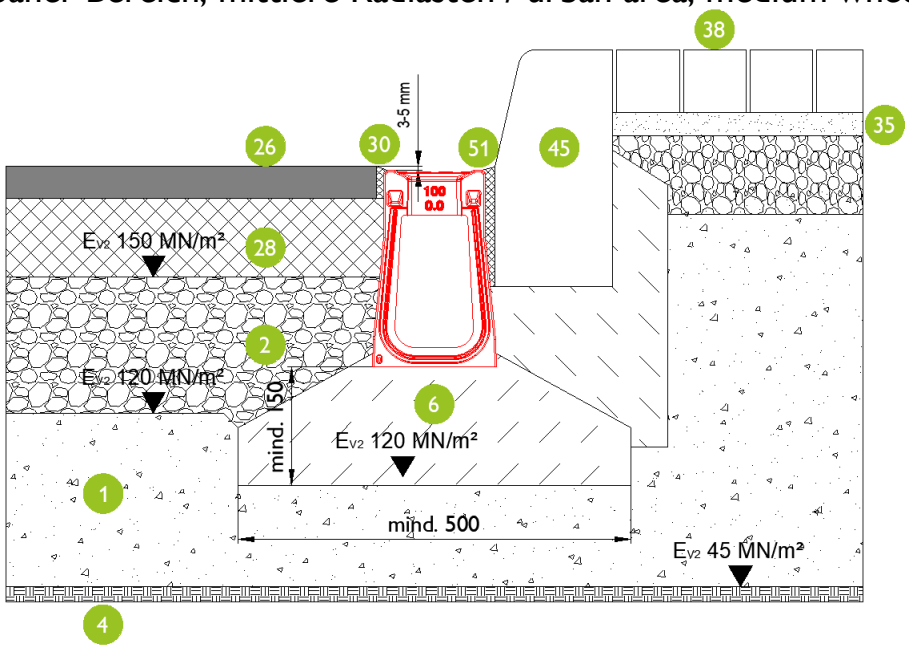
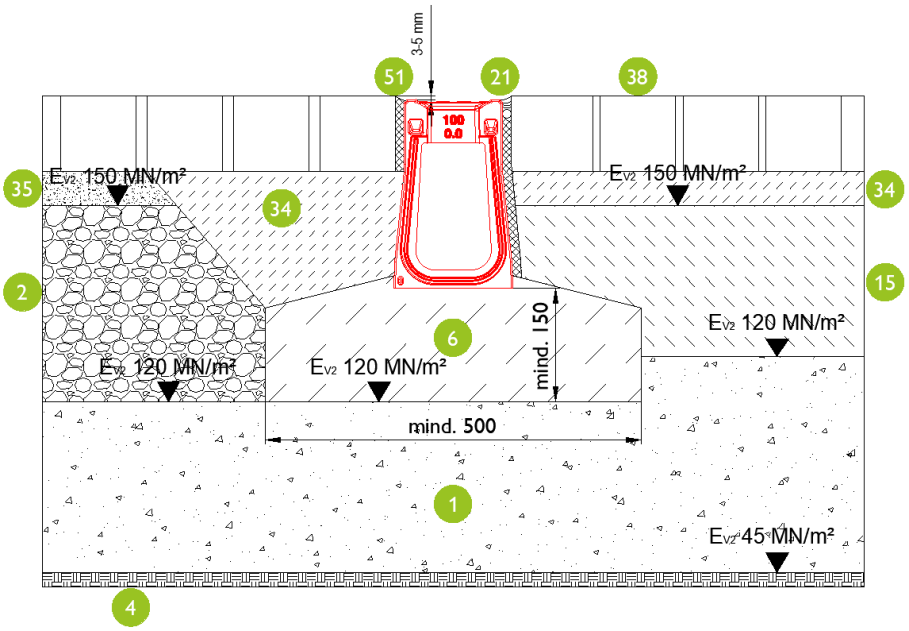
Asphalt / asphalt - Bordstein / kerbstone: Kl. / cl. A – C

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



Pflaster / pavement - Pflaster / pavement: Kl. / cl. A – D

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



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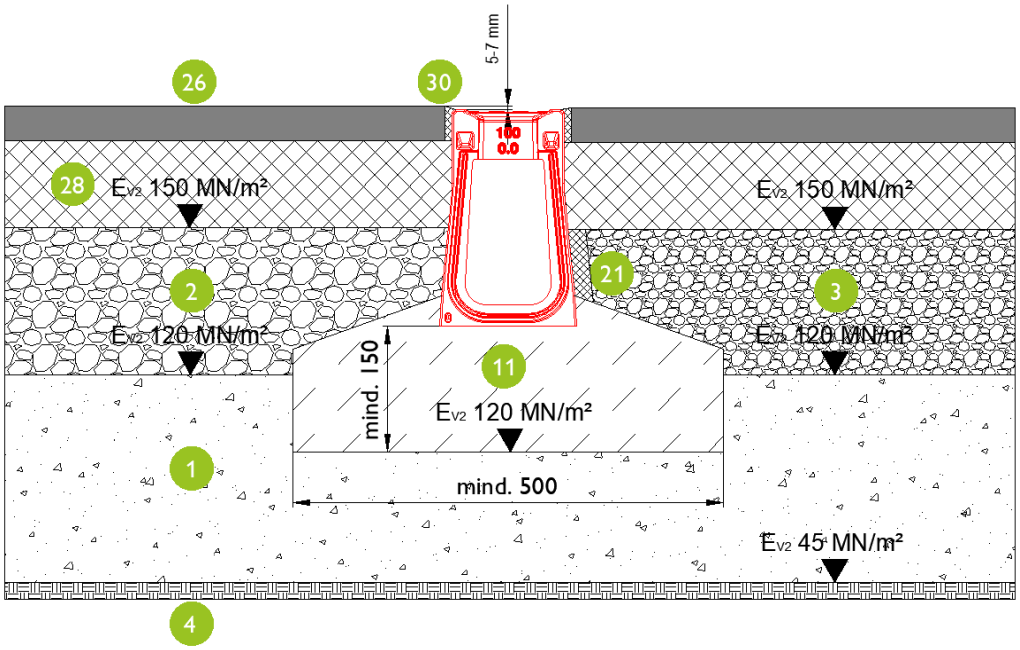
2.	tragfähige Schotterschicht / load-bearing gravel layer	30.	bituminöses Fugenband / bituminous sealing tape
4.	Unterbau Planum / subgrade level	34.	Mörtelbett / mortar bed
6.	Vollflächiger Bettungsbeton / concrete bed	35.	Splittbett / grit bed
15.	Drainagebeton / drainage concrete	38.	Pflastersteine / paving stones
21.	Dehnfuge / expansion joint	45.	Bordstein / kerbstone
26.	Feinbelag / surface course	51.	Lunker-freier Fugen-Verguss / cavity free sealing

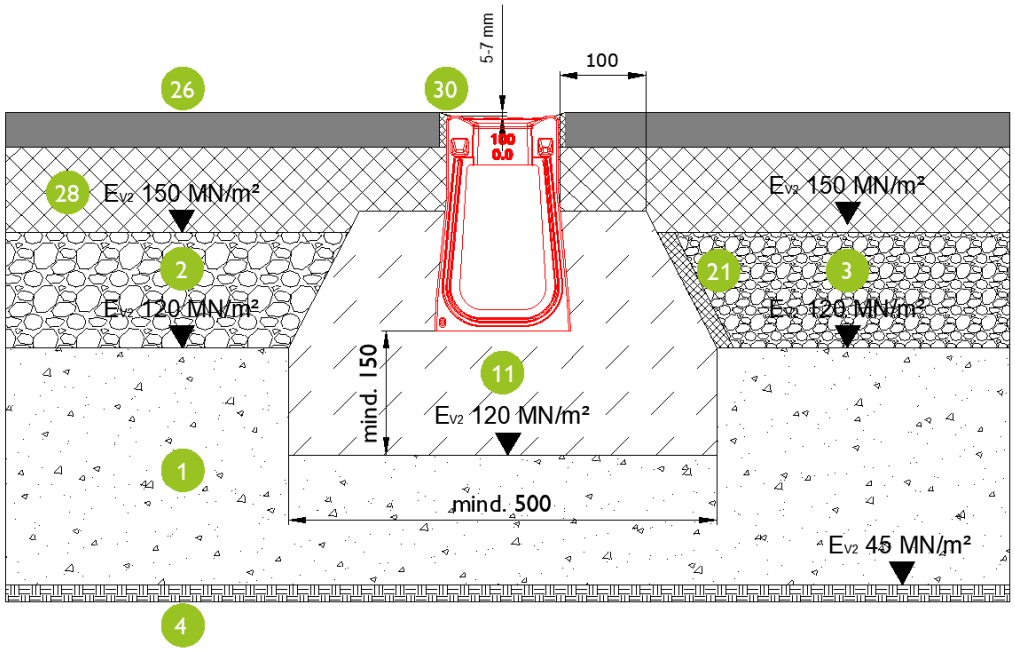
Asphalt / asphalt - Asphalt / asphalt: Kl. / cl. A – C

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



Asphalt / asphalt - Asphalt / asphalt: Kl. / cl. A - D

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



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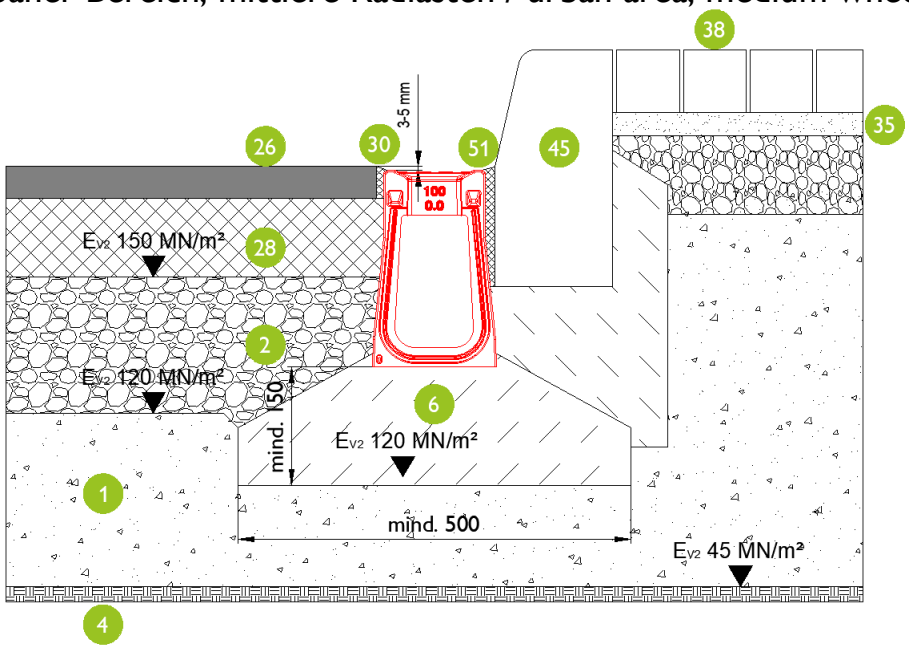
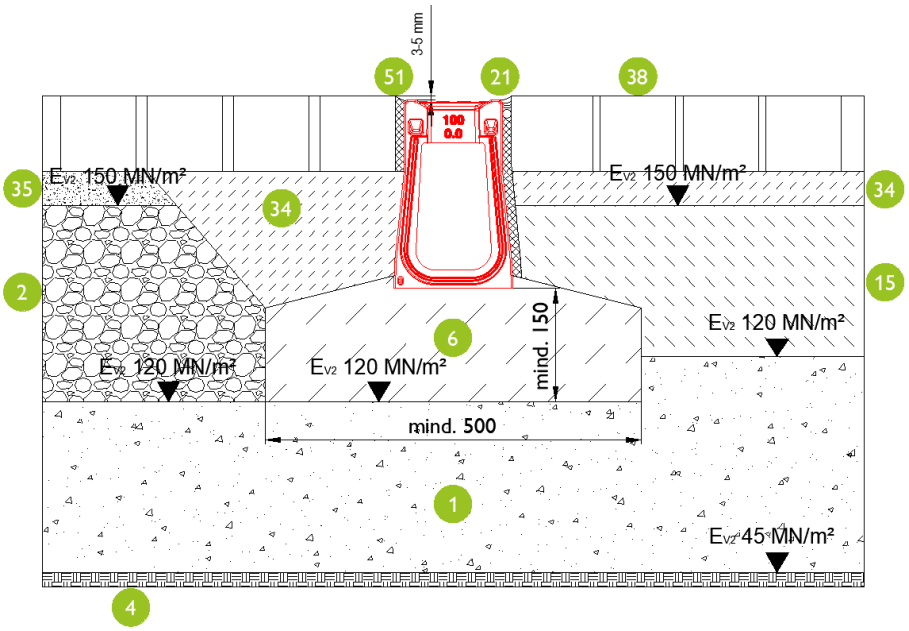
Asphalt / asphalt - Bordstein / kerbstone: Kl. / cl. A – C

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



Pflaster / pavement - Pflaster / pavement: Kl. / cl. A – D

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



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2.	tragfähige Schotterschicht / load-bearing gravel layer	30.	bituminöses Fugenband / bituminous sealing tape
4.	Unterbau Planum / subgrade level	34.	Mörtelbett / mortar bed
6.	Vollflächiger Bettungsbeton / concrete bed	35.	Splittbett / grit bed
15.	Drainagebeton / drainage concrete	38.	Pflastersteine / paving stones
21.	Dehnfuge / expansion joint	45.	Bordstein / kerbstone
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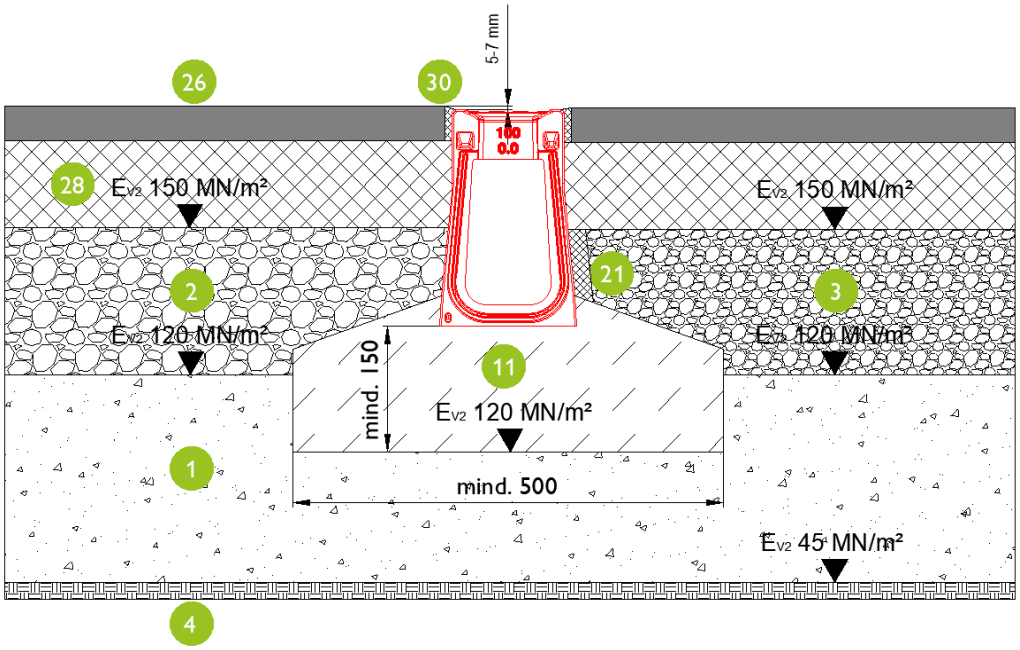
Asphalt / asphalt - Asphalt / asphalt: Kl. / cl. A – C

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



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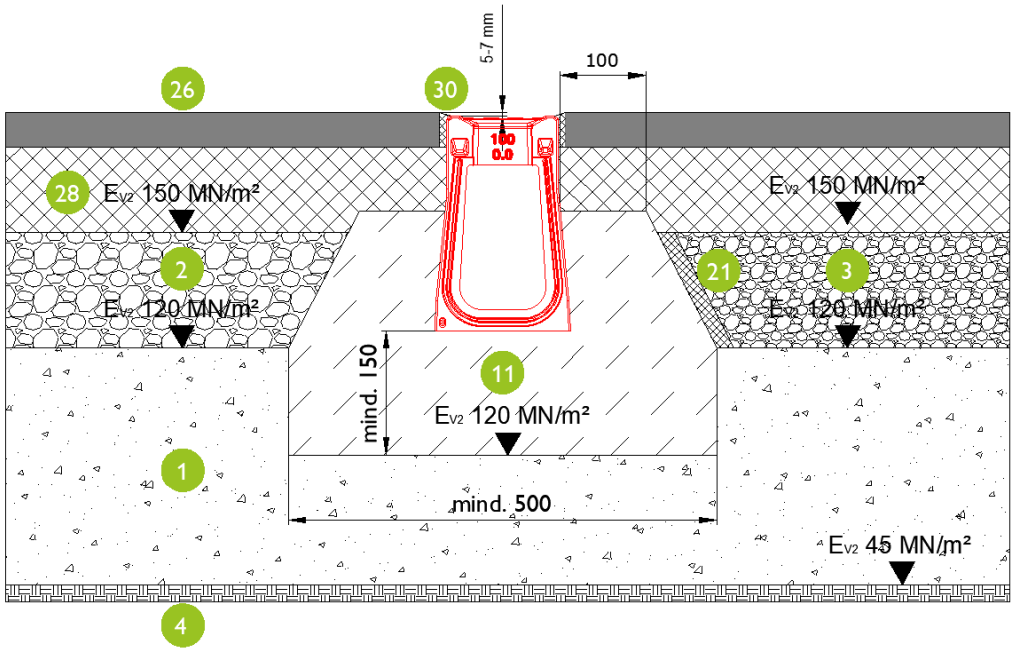

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GRASPOINTNER
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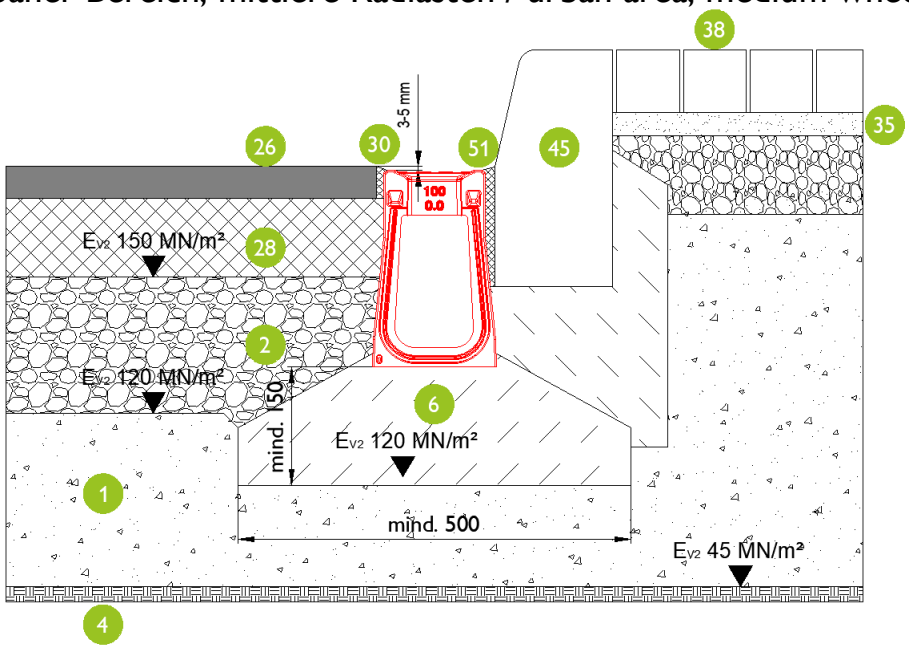
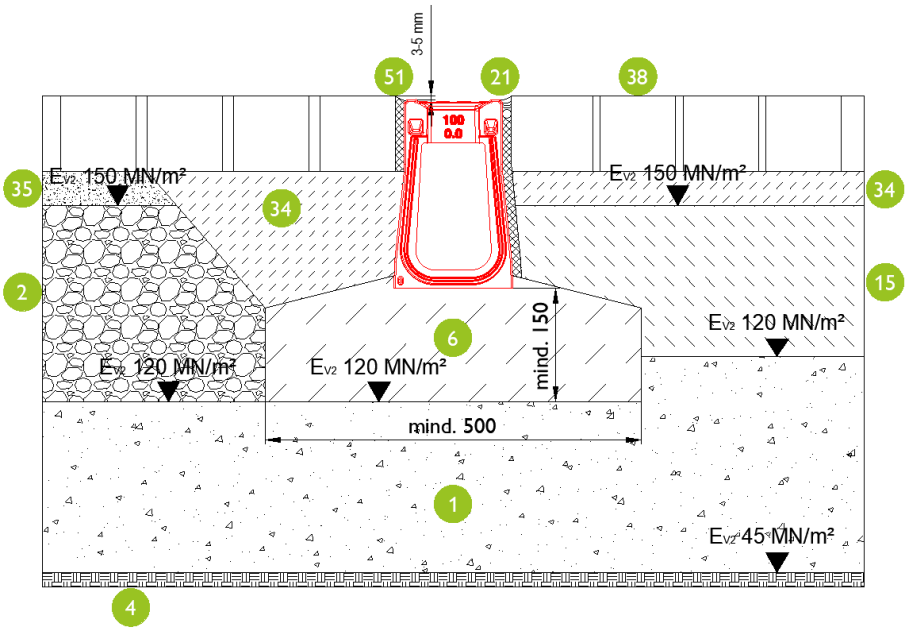
Asphalt / asphalt - Bordstein / kerbstone: Kl. / cl. A – C

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



Pflaster / pavement - Pflaster / pavement: Kl. / cl. A – D

urbaner Bereich, mittlere Radlasten / urban area, medium wheel loads



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