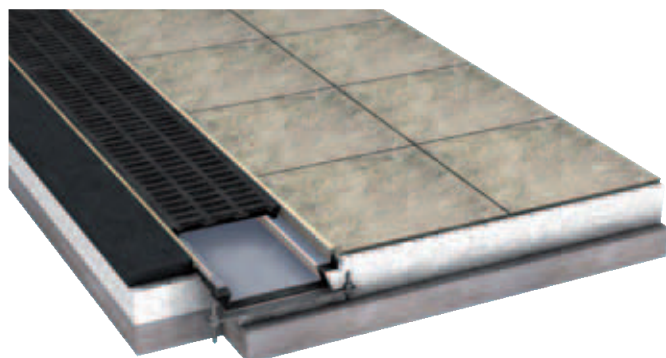


Installation guidelines

1. The following installation guidelines and examples are designed to use for an accepted standard and has to be adapted to the location conditions from the planner. Consider the common known technical rules and guidelines which are accepted among experts.

2. The installation must be carried out like the installation examples:
 - 2.1. There must be a recess or an anchoring to the slab formwork be provided according to the installation example..
 - 2.2. When using connecting sockets with anchor plates the holes for the mounting have to be measured and drilled according to the installation examples.
 - 2.3. The connecting sockets have to be attached, with intervals of max 2000 mm respectively at every rebated joint, to the foundation. Mountings (bolts, anchors,) have to be sealed!
 - 2.4. When using connecting sockets without anchor, the channel elements are selectively adjusted and secured in each rebated joint with a construction adhesive.
 - 2.5. To achieve tightness to the channel line, we recommend to weld the joints tightly or to use a sealing system before the grouting system is introduced.
 - 2.6. Application of sealant system:
 - 1) light sanding the components in the joint area with a fine abrasive pad
 - 2) clean the components in the joint area with cleaning agent
 - 3) apply primer
 - 4) adhering and sealing; in placing the channel, each channel can be glued to the connecting socket, the joint is sealed after the introduction of the grouting

***NOTE: We recommend SIKA products, such as Cleaner-205, Primer-3 N Sikaflex-Tank! Please follow the application instructions and warranty conditions of the manufacturer!**
 - 2.7. Construction time barrier: During the construction period a precisely fitting shuttering board for reinforcing and to protect from contamination of the channel has to be inserted instead of the grating. The construction time barrier must not be removed until the grout has cured. After removing the cover, we recommend to clean the channel.
 - 2.8. Introducing the grout: It has to be sure that the grout envelopes the contour of the channel at an entire surface and without bubbles outside. The channel has to be seated solidly to 100%. If this is not the case, the channel body can be deformed.



3. The outlets of the channel lines should be derived through a ceiling brake, which is a shell casing installed as a recess in the ceiling. The inside diameter of the pipe lead as a ceiling brake should be at least 125 mm up to max. 140 mm. The outlet connection of the car park channels has a standard outer diameter of 102 mm. The length of the outlet pipe should be chosen so that it protrudes at least 50 mm below the ceiling!

4. Between the car park channel and the road connecting we recommend making a maintenance joint. The maintenance joint should be sealed with an elastic sealant.

5. All adjoining surfaces should be permanently approximately 3 - 5 mm above the surface of the grating so that whilst snow clearing, cleaning or any other uses the gratings of the channel cannot be damaged or unlocked!

6. The gratings must be installed accurately fitted to the length of the channel lines. Through the grates are put together firmly a longitudinal movement can be avoided.

7. The bolting of the cover must be tightened with a torque wrench with 8 Nm. If the bolts are overwound, brackets and locking clips can deform.

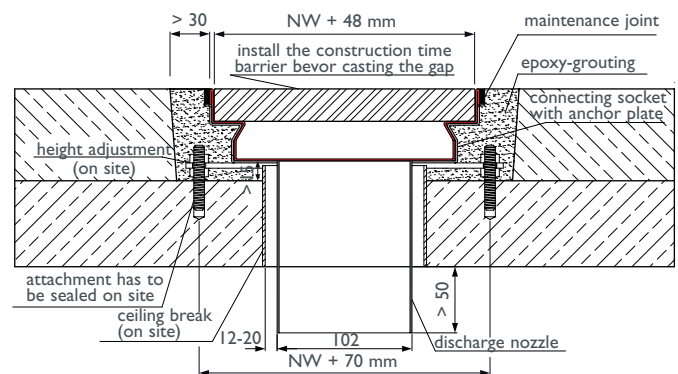
8. The bolting of each grating has to be checked regularly.

9. General:

9.1. In areas where enhanced chemical attacks (e.g. de-icing salts, acids, bases, etc.) are expected, we recommend to install car park channels made of high quality stainless steel (e.g. 1.4571 - V4A).

9.2. Cleaning and maintenance: We recommend cleaning the channel as required to remove deposits of de-icing agents, acids, alkalis and other chemicals.

9.3. A general guideline in production and processing is also the EN 1433.



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WARNING: acceleration-, braking- and torsional forces must be considered separately. Follow the installation instructions. Technical changes reserved.

