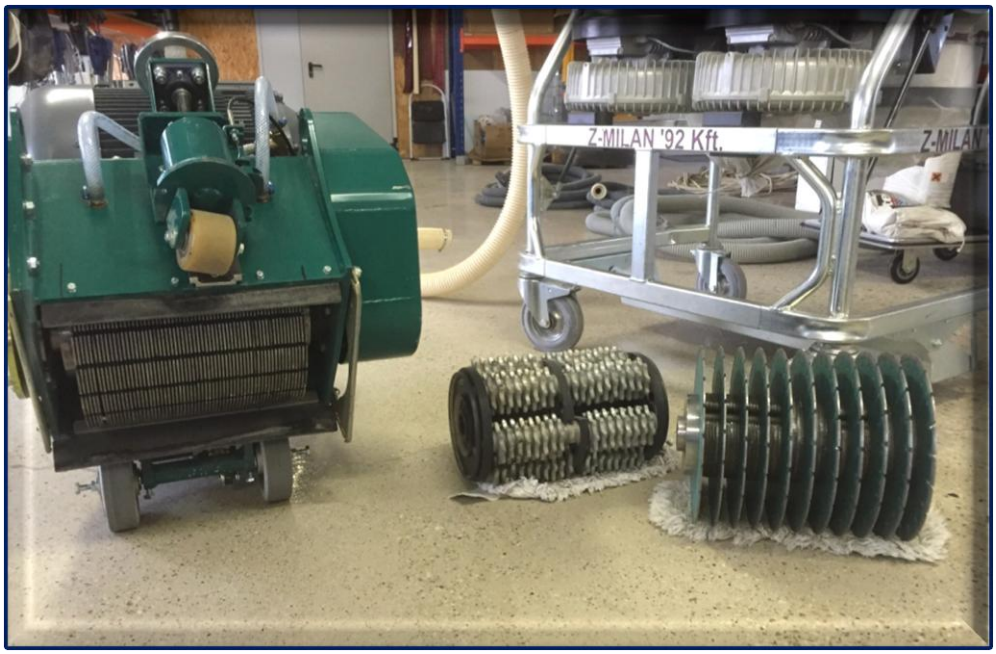
CONCRETE MILLING, CONCRETE FLOOR ROUGHENING CONCRETE PLANING

Common problems of concrete surfaces include poorly realized, uneven concrete surfaces with smoothing traces. Defects can be classified into several groups, depending on the extent of the irregularities:

- Flatness defect. This problem type is practically always present, it is impossible to avoid. Basically, its extent is not defined, it depends in every case on the planned use of the area. Generally, it is only problematic in high-bay warehouses, where level differences should not exceed 1-3 mm for 1 lm. In most cases, these defects are not significant for uses other than high-bay warehouses. Their elimination requires a very complex process, for which you may need a theodolite, a floor planer, and a concrete grinder.
- Compaction defect. This is the most common type of defect, resulting from the improper manual or mechanic treatment of the upper, fresh concrete layer (in industrial uses, no manual operations are applied). Visual signs of these type of defects are traces caused by the vibrating screed or, if a concrete helicopter is used, circular smoothing traces are visible on the surface. These defects are limited in their extent, but within 1 meter, up to 10-20 screed or smoothing traces may be present. They can be eliminated or repaired by concrete roughening and/or concrete polishing.
- Level deviation, level difference. All surface defects generated during concreting works, resulting in significant level differences (greater than 1 lm/1 cm). If concrete paving slabs are used, level differences (greater than 1 cm) between the concrete slabs are also included in this type of defect. To eliminate these defects, concrete milling should be applied, which is a coarse and aggressive operation.
- Uneven concrete slabs with important level differences (greater than 1.5 cm) and surfaces plenty of other surface defects. The defects can be eliminated effectively using a floor planer. The basic difference between a concrete floor planer and a concrete milling machine is that the milling machine removes a certain layer from the whole surface, leaving a coarse texture, while the floor planer only removes the bumps (high spots) from the surface. Its serially mounted cutting discs leave a uniformly ribbed surface, which can be transformed into a perfectly flat surface by concrete roughening or polishing.



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During concrete milling, a layer of a predefined thickness is removed uniformly from the surface. This process is generally used if the existing floor level is higher than the planned level. Due to this higher level, doors cannot be opened or possibly the thickness of the tiles and adhesive layers has not been taken into consideration. In these cases, several centimeters are to be removed from the surface.

Using a floor planer, the so-called “bumps” or “high spots” of the surface can be removed. The floor planer, contrarily to concrete milling machines, only removes these higher spots or patterns and does not treat the deeper areas. It is easy to create a flat surface: Flatness and levelness are ensured as necessary. In both cases, a concrete layer of 2 cm can be removed in one step.

Concrete roughening is used to remove the smaller irregularities of surfaces. This technology is most commonly used for removing the residual adhesive layer after the demolition of a floor cover. The same technology can be used for leveling “protruding” gravels with concrete surfaces, eliminating one of the most common defects of old concrete surfaces.

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