

MAINTENANCE MANUAL FOR REBLOC® PRECAST CONCRETE SAFETY BARRIER FOR PERMANENT USE

General

This manual is valid for REBLOC Permanent Systems and REBLOC SWITCH Systems in permanent use.

REBLOC precast concrete safety barriers are made of high-quality and durable materials. The connection couplings are integrated in the elements, in most cases no loose additional parts are required. For these reasons, REBLOC systems offer long durability and maximum security against vandalism.

Maintenance

If there has been contact between the vehicle and the precast concrete safety barrier in the event of an accident, maintenance work may be necessary. Therefore, after such an event, a visual inspection of the relevant section must be carried out. Depending on the severity of the impact, the following measures shall be carried out:

- 1) If there are only scratches and / or abrasion marks visible but no cracks and no deflection of the system no maintenance / repair work is necessary.



- 2) If there is no damage / crack formation visible and the system has been displaced, it is sufficient to replace the effected barriers in their original location (see installation instructions).



- 3) If there are cracks with a width $< 0,2$ mm or parts of the reinforcement exposed because of concrete spalling the functionality of the barrier is ensured. In order to ensure the function permanently, the affected elements must be replaced or repaired.
- 4) If cracks with a crack width > 0.2 mm or longitudinal or end-side spalling are visible, the concrete elements must be repaired according to the repair instructions. In the case of damaged or detached reflectors, they must be replaced.



- 5) If strong cracks (> 2 mm) and/or strong spalling have arisen as a result of the impact and/ or damage / deformation of the coupling is visible, the restraint function can no longer be ensured. In this case the affected elements shall be exchanged for new ones.



- 6) If damage or deformation of the coupling is visible, the restraint function can no longer be guaranteed. In this case, the affected elements shall be immediately exchanged for new ones.
- 7) In case of an impact it must be additionally checked if damages appear in the area of the tongue and groove. If so, the affected elements need to be replaced.

The remarks above also apply to the terminal elements and their anchorage. It is extremely important in cases of potential damage to the anchoring foundation to inspect the anchoring bolts and the anchoring plate.

Durability

Concrete C30/37 is used in the REBLOC precast concrete safety barrier, the concrete cover is as indicated by EN 13369 / EN 1992-1-1. The concrete exposure class is dictated by the climate and local environmental conditions. In the temperate zone, where the application of thawing salt occurs in the winter season the concrete class XF4 according to EN 206 is applied.

All exposed steel parts, in particular the connection coupling, are hot-dipped galvanized in accordance with EN ISO 1461. Climate and environmental-related requirements of the construction site are considered as de-icing salt is used in the temperate zone. Here the climate and environment-related requirements of the installation location are taken into account, which in the temperate zone applies to the use of road salt according to the above specifications. In accordance with the evaluation methods EN ISO 1461 and EN 206-1 REBLOC concrete safety barrier can be considered to have a life cycle of 25 years in minimum depending on the weather and environmental conditions.

Environmental Recycling

The disposal of a REBLOC precast concrete safety barrier should incorporate all appropriate recycling principles. The steel parts (reinforcement, tension bars and connecting coupling) of the barrier should be mechanically separated from the concrete. Each material type being environmentally recycled through approved recycling companies. There are no regulated substances within the REBLOC concrete safety barrier.

Further documents

- Overview Damage classification of REBLOC systems
- Instructions for Damage classification of REBLOC systems
- Repair manual REBLOC precast concrete safety barrier
- Data sheets of the used REBLOC systems
- Installation instructions of the used REBLOC systems