

MAINTENANCE MANUAL

REBLOC[®] ROAD RESTRAINT SYSTEMS

for:

REBLOC NB100/300_8_H2/W4

REBLOC NB100H/300_8_H3/W5



1. General

The REBLOC[®] vehicle restraint system is very maintenance friendly. There are no required loose parts and the connecting coupling is integrated into the elements. Thus, the REBLOC[®] system provides maximum safety against vandalism. Basically the system is maintenance-free and no regular maintenance work is required. Visual inspections on visible damages have to be carried out on a regular basis.

Maintenance work may be necessary after a vehicle impact. Depending on the severity of the impact there are various scenarios:

- 1) If there are only scratches and / or abrasion marks visible but no cracks and no deflection of the system no maintenance / repair works 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. Nevertheless to ensure durability the affected barriers must be replaced or refurbished.
- 4) When there are severe cracks (> 2 mm) and / or severe concrete spalling and / or damage / deformations are visible to the connection coupling, the barrier system functionality can no longer be guaranteed, the effected safety barriers elements must be replaced immediately.
- 5) After an impact it has to be checked, if the elastomer bearings are still in position. If not, the noise barrier elements have to be lifted with a suitable crane and the elastomer bearings need to be repaired or replaced.
- 6) Additionally the absorbers have to be checked for damages. To avoid an optical or acoustic impairment due to damaged absorbers, they have to be replaced (see point 2). In this case the noise barrier elements or single absorber blocks can be replaced.

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



abrasion marks, system not damaged



Damaged absorbers, replacement necessary

2. Replacement of absorbers

In case of damages to the wood concrete absorber (e.g. at minor accidents) it can be necessary to replace single or whole groups of absorbers. When fixing the new absorbers, attention has to be paid to an equal connection quality as the original (factory-made).

Damaged absorbers have to be removed completely and new absorbers (same in format and form) have to be stuck with frost resistant mortar to the noise barrier. Please refer to the instructions of the mortar for the correct application.

In addition, stainless screws with appropriate washers have to be set. The screws fix the wood concrete absorbers in their position during the hardening of the mortar and remain on the system as an additional connection.

3. Durability

Concrete C30/37 is used in the REBLOC[®] vehicle restraint system, 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.

Separate evidences as well as recorded values are available for the absorption material, which can be provided on request.

The elastomer bearings of the REBLOC NB-series show a good ozone and weather resistance.

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 Barriers can be considered to have a life cycle of twenty-five years in minimum depending on the weather and environmental conditions.

4. Environmental Recycling

The disposal of a REBLOC[®] Concrete Barriers unit should incorporate all appropriate recycling principles, which is also valid for noise for the noise barrier elements of the NB-series. 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[®] road restraint system.

5. Applicable documents

Datasheet REBLOC NB100/300_8_H2/W4

Datasheet REBLOC NB100H/300_8_H3/W5

Datasheets special elements to the corresponding systems

Installation instructions REBLOC Noise Barrier