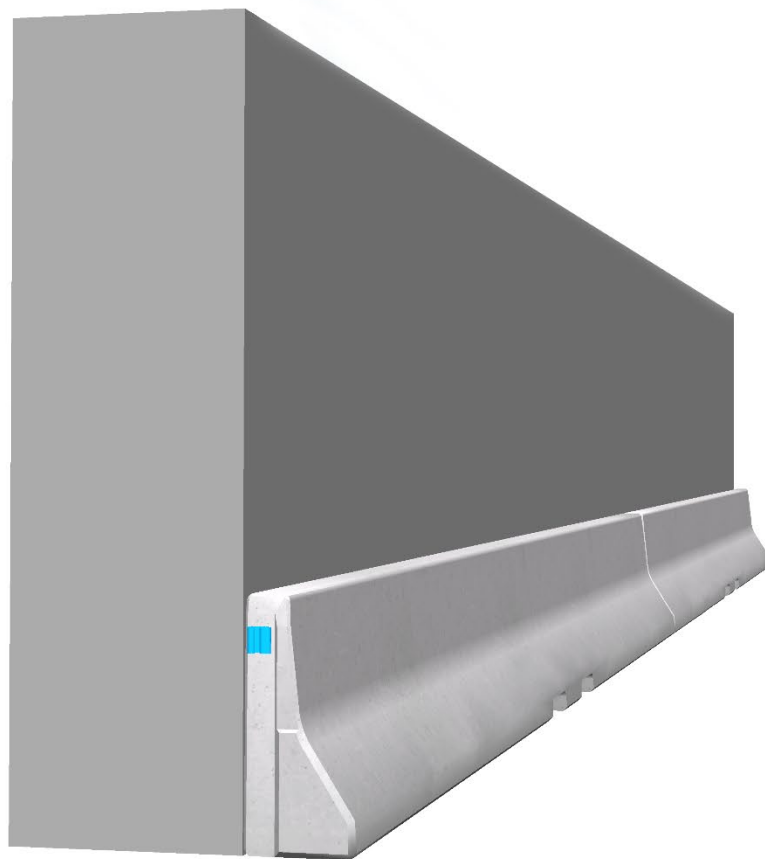


INSTALLATION INSTRUCTIONS

REBLOC[®] PRECAST CONCRETE BARRIER

for:

REBLOC 80XW_8 (H2/W1)



1. Important remarks

The following installation instructions serve as a support for the self-installation of the REBLOC® restraint systems by the customer. Knowledge of and compliance with all relevant regulations and standards (motorway construction sites, installation, safety, etc.) as well as the work safety precautions must be assured before starting any installation work. The same applies for the professional installation and the use of any auxiliary equipment e. g. lifting clamps or cranes. When the elements cannot be placed for intermediate storage on a level or paved carriageway / surface for short or long time periods (e.g. for intermediate storage during system installation), appropriate measures must be taken in order to prevent toppling / overturn of the elements (e.g. use levelling shims / wedges to ensure a level foundation). Ensure that this installation instruction is the current valid edition (version number / date).

2. General

The connecting coupling of the REBLOC® Safety Barrier Systems is fully integrated in the safety barrier. No auxiliary or additional parts are required. It must be ensured that only matching elements are connected with each other to secure a complete system efficiency in accordance with EN 1317. The combinable and matching elements are presented in the info sheets "Product Overview" and the respective data sheets. In the case of exceptional local conditions, it is important to refer to the national regulations and / or to consult the project contractor or the safety barrier manufacturer.

3. Minimum installation length

The minimum installation length is required to secure the efficiency of each single REBLOC® system according to EN 1317. The minimum installation length depends on the safety barrier system and the containment level and is indicated in the data sheets.

4. Foundation and underlay

The system should be disposed on a flat, structurally stable and frost resistant surface.

- The levelness of the underlay shall not exceed $\pm 1,5$ cm per 8m measuring length (longitudinal).
- Maximum transverse tilt relative to the carriageway: 10 %
- Load carrying capacity: minimum 200kN/m²
- The underlay should be according to national regulations and standards.
- It should be ensured that there is no foreign particle under/close to the barriers which may cause uneven coupling meshing or unnecessary twisting of the barrier.
- The continuity of height and alignment of the barrier system must be ensured.

5. Continuous tension bar

The restraining function is achieved through the coupling connection between each element in combination with the continuous tension bar. The correct connection of the individual elements with the built-in couplings is therefore of great importance.

6. Positioning in front of rigid wall

The system 80XW_8 was developed for the use directly along rigid vertical wall constructions, for example along tunnel walls or other massive wall constructions in the area of civil engineering structures. Therefore, the elements must always be positioned in direct contact with the vertical wall construction. There is no need to anchor the elements.

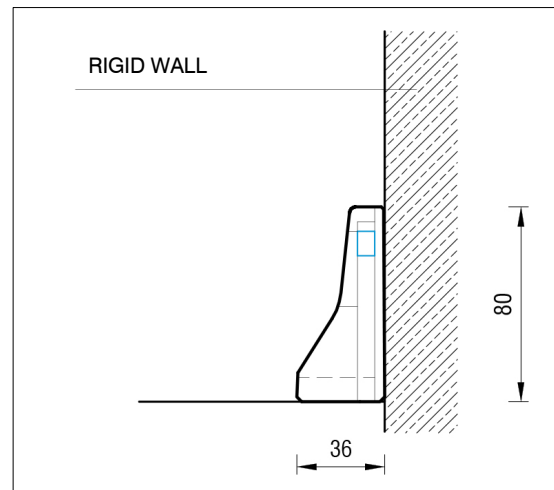


Figure 1: Positioning along (tunnel) wall

7 Applicable documentation

Data sheet REBLOC 80XW_8

8 Installation process

8.1 Delivery of the elements

The elements are delivered to the construction site on suitable vehicles. For impeccable access and departure routes must be ensured. In the case of construction sites on busy roads, it is necessary to ensure that the prescribed road safety measures are carried out. Installation work should be carried-out in the direction of the traffic flow.

8.2 Unloading of the elements

After the removal of the transport securing devices, the single elements are taken from the truck with suitable lifting gears with sufficient lifting capacity (gripping tongs or belts) by an appropriate crane (loading crane, mobile crane).

Care must be taken during construction on busy roads to ensure that at no time any parts of the elements or the vehicles (truck, crane, ...) are extended into the traffic area. Also pay attention to power lines located above or next to the lifting area of the crane.

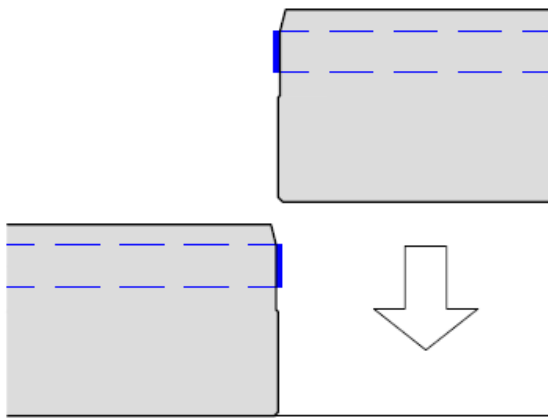
8.3 Positioning of the elements

Each element has along the contact surface two recesses, intended for transport and assembly of the elements by means of forklifts or side loading forklifts. It is recommended to use a side loading forklift. The concrete elements have a length of 8 m and a weight of approx. 3.4 t. Use only forklifts with sufficient load capacity.

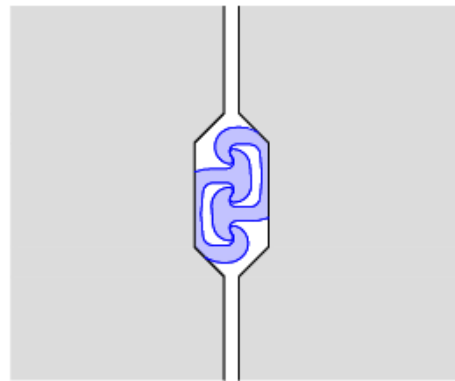
The concrete elements may only be lifted and transported with extreme caution. The used surface must be flat and free of foreign particles. To protect the concrete elements, the forklift tines must be covered with rubber mats.

8.4 Connection of the elements

The element to be offset must be positioned on the face side and from above to the already placed element. When lowering, the couplings (according to drawing 3) must interlock in a form-fitting manner. It is important to avoid contact between the precast concrete elements during installation and manipulation, this avoids any concrete damage.



drawing 2: Positioning of the elements



drawing 3: Top view couplings

9 Further information

- Control of lifting anchors and lifting equipment before moving/lifting the concrete protective walls.
- Only experienced and suitably trained operators should carry-out this installation work.
- A minimum working area width of 7 m for cranes and installation work is recommended, not including the minimum safety distance according to the national requirements and regulations for construction work on highways and expressways. In minimum 5 m on the crane side/installation side of the safety barriers and in minimum 2 m clearing on the far side of the safety barrier.
- The installation location and the lines of the concrete protective walls should be marked by the client and accordingly be set up to fall in line. Also to achieve a continuous and optical line.
- The underlay must be level and free from foreign particle, ice and snow.
- Barriers should be placed level with the traffic lane and there should be no obstacle within the working width.
- Lift and manipulate only one barrier at a time, in no circumstance should two or more barriers be simultaneously manipulated.
- Barriers should remain horizontal when lifted, and it must be ensured that no part of the barrier or the lifting system/crane projects into the traffic-flow.
- Barriers should be lifted and positioned avoiding any barrier damage.
- Barriers should be installed according to the system plan (when provided).
- Work from the traffic-free side of the barrier and at a safe distance from the traffic flow.
- Technical drawings (including tolerances) for the installation of elements are available upon customer request.