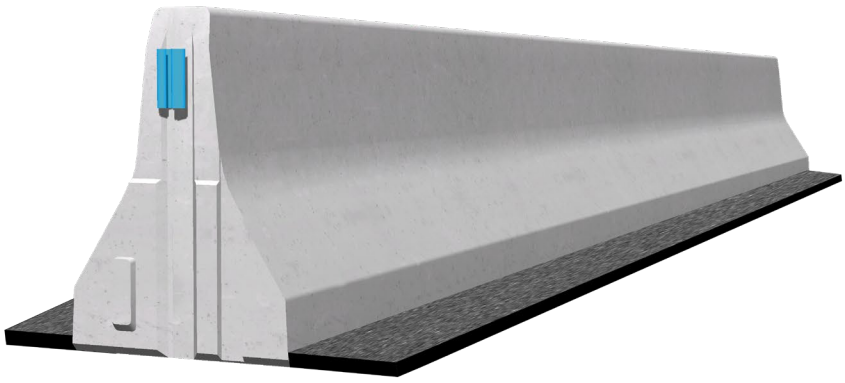
INSTALLATION INSTRUCTIONS

REBLOC® PRECAST CONCRETE BARRIER

for:

REBLOC 84XEAL_8 (H2/W1)

REBLOC 84XEA.3_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 installed on a flat, structurally stabile and frost resistant surface.

- The levelness of the underlay shall not exceed ± 1,5 cm per 8 m measuring length (longitudinal).
- Maximum transverse tilt relative to the carriageway: 10 %
- Load carrying capacity: minimum 200kN/m^2
- 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 by the coupling connection between each element in combination with the continuous tension bar. The correct connection of the individual elements by means of the built-in couplings is therefore of great importance.

6. Embedded in asphalt or concrete

The REBLOC systems 84XEAL_8 and 84XEA.3_8 are designed for a very low working width level of W1. This level can be achieved by embedding the system in asphalt or concrete.
In general the safety barriers are installed along a marked contour upon a base layer (asphalt, concrete, frost resistant and structurally stable soil). Afterwards a 4 cm thick asphalt top layer is applied on both sides of the safety barriers.
Alternatively, the system can be installed on a finished road surface (asphalt or concrete), when previously a 4 cm deep and 64 cm wide recess was milled out of the road surface. In both cases it is important to pay attention to a proper closure of the longitudinal joints between concrete and asphalt. Measured from the road surface the height of the restraint system is 80 cm.

7. Applicable documentation

Data sheet REBLOC 84XEAL_8
Data sheet REBLOC 84XEA.3_8

8. Installation process

8.1. Preparing the surface

On the part of the client, a base layer must be produced 4cm below the finished road level. This subsoil must meet the necessary requirements (see point 5).

8.2. 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.

8.3. Unloading and positioning of the elements

After the removal of the transport securing belts / devices, the elements are taken from the truck with suitable lifting gears with sufficient lifting capacity (gripping tongs, belts or alternatively lifting holes and through bolts) by an appropriate crane (loading crane, mobile crane). The elements are positioned and adjusted along the previously marked road surface. Construction sites on busy roads must ensure adequate safety for the installation team and the motorway / road users – no vehicle / crane / or part of the safety barrier is allowed to protrude into the flow of traffic / active traffic lanes. Overhead electric cables adjacent to the construction site must be inspected and all work planned to avoid any contact with these cables.

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 figure 2) 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.

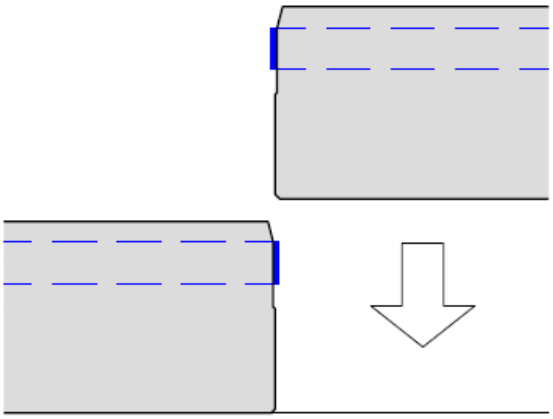


Fig. 1: Positioning of the elements

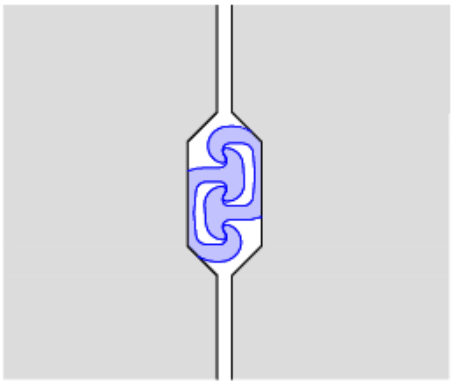


Fig. 2: Top view couplings

8.5. Final asphalting work

After the installation of the concrete elements, a 4 cm thick top layer of asphalt has to be made on both sides of the safety barriers. The proper filling of the longitudinal joints between concrete and asphalt has to be observed.

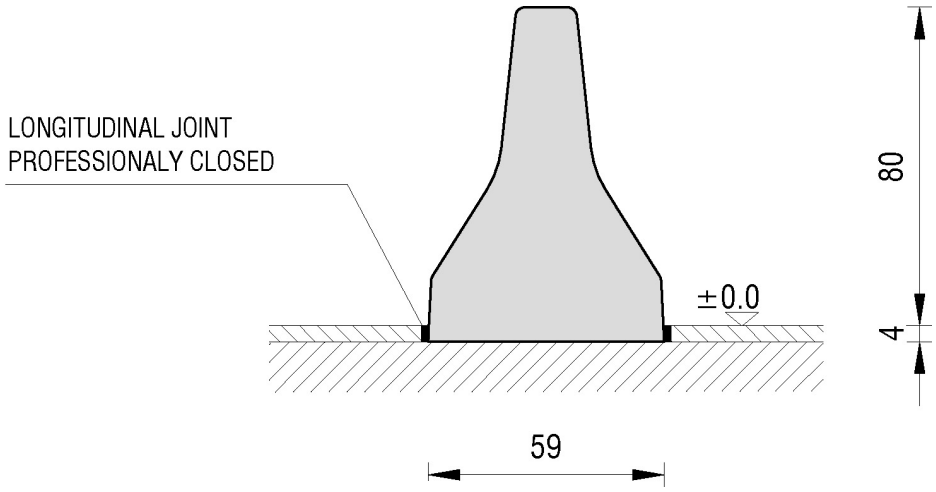


Fig. 3: Standard installation

9. Further information

- Control of 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 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.
- All work sites with increased danger of falling from a height require safety measures for installation personnel, equipment and work tools.

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