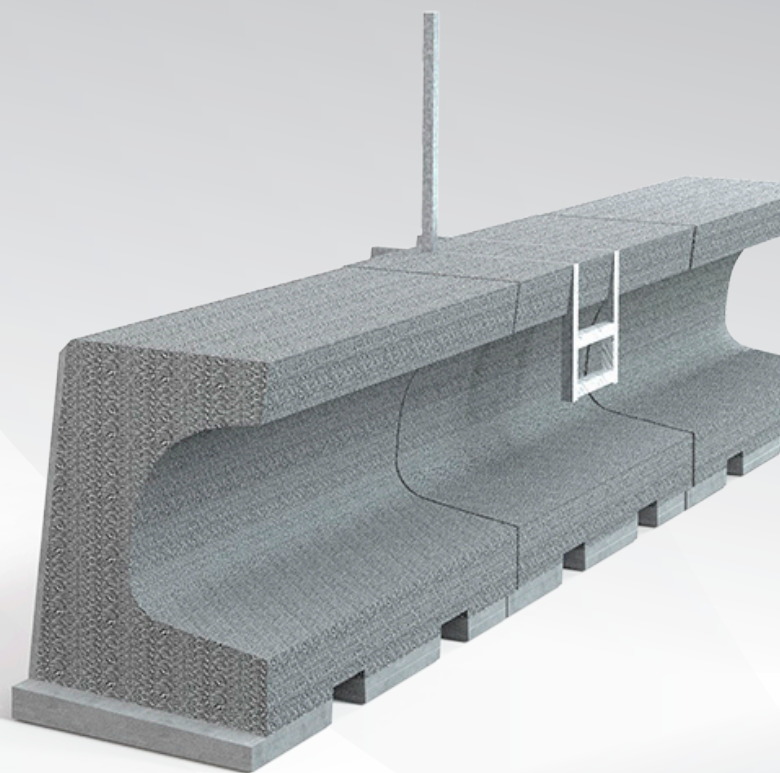


QUIE@RAIL



PHONOBLOC®
NOISE BARRIERS

Noise protection without compromises

QUIE@RAIL
NEAR-TRACK NOISE PROTECTION

PHONOBLOC.COM

GETTING NOISE UNDER CONTROL

Developed by PHONOBLOC® for highest acoustic demands and long durability without maintenance.

PHONOBLOC® QUIE@RAIL

LOW AND NEAR-TRACK NOISE BARRIER

New requirements need new technologies — this was the starting point for a Deutsche Bahn research project to develop a near-track noise barrier.

The result is the very effective and cost-efficient Quie@Rail noise barrier, which has a low height and due to its close positioning to the railway tracks meets all current requirements for railway lines in Germany. The German Federal Railway Authority (EBA) approval of this product for Deutsche Bahn and the user declaration of DB Netz AG certify the excellent product properties.

Very good sound protection properties in accordance
with the German Railway Directive
SCHALL 03

With a track axis distance of 2.10 m to the front edge of the Quie@Rail noise barrier and an installation height of 50 cm above rail top edge, this product achieves an average sound reduction of more than 5 dB. This sound reduction was achieved at a distance of up to 25 m and a measuring height of up to 3.5 m above rail top edge in accordance with the German Railway Guideline Schall 03.



View from the track side, emergency escape ladders positioned every 6 metres



View from the outer side with drainage openings and emergency escape ladders

In order to also meet the requirements for a possible evacuation of a train, prefabricated elements with integrated emergency escape ladders were developed, which can be positioned at varying distances according to national requirements.

PHONOBLOC®

FULLY TESTED AND CERTIFIED

- ▶ According to German Railway Directive Schall 03
- ▶ According to EN 14388

USE ON RAILWAY LINES

- ▶ Track side and top side highly absorbent due to aggregate-porous concrete
- ▶ Closed concrete surface layer on the outer side

DESIGN

- ▶ Rough, open-pored concrete surface on the track side and top side, colour in concrete grey
- ▶ Closed concrete surface on the outer side, colour in concrete grey
- ▶ Integrated ladders made of galvanised steel - on request colour-coated according to RAL colour chart
- ▶ On the track side embedded with railway ballast

BENEFITS

- ▶ Combination of open-pored concrete formulation with suitable design and low construction height
- ▶ Absorption of train rolling noise
- ▶ Noise perception in close proximity is reduced

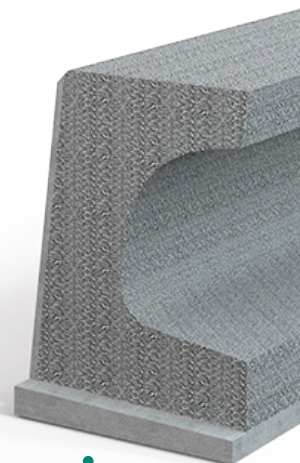


**RAIL
APPLICATION**

PROPERTIES

Element length	2.10 m incl. tongue and groove (system length 2 m)
Element height	1.28 m (0.5 m above rail top edge)
Element width bottom side	0.92 m
Element width top side	0.75 m
Element weight	2,930 kg

No earthing required as there is no reinforcement mesh.
2 drainage openings on the bottom side of each element.
Tested up to a train speed of 160 km / h.



QUICK AND EASY INSTALLATION / REMOVAL

The prefabricated elements enable a simple and quick installation. If necessary, they can be quickly removed and temporarily stored without removing various installation parts.

QUIE@RAIL PRODUCT RANGE

Type	Effect measurement of sound level reduction inSitu Schall 03 (Deutsche Bahn AG)
Single sided	≥ 5,5 dB ¹⁾
highly absorbent	≥ 5,3 dB ²⁾

1) Distance measuring point to track axis 7.5 m, 1.2 m height above rail top edge
2) Distance measuring point to track axis 25 m, 3.5 m height above rail top edge

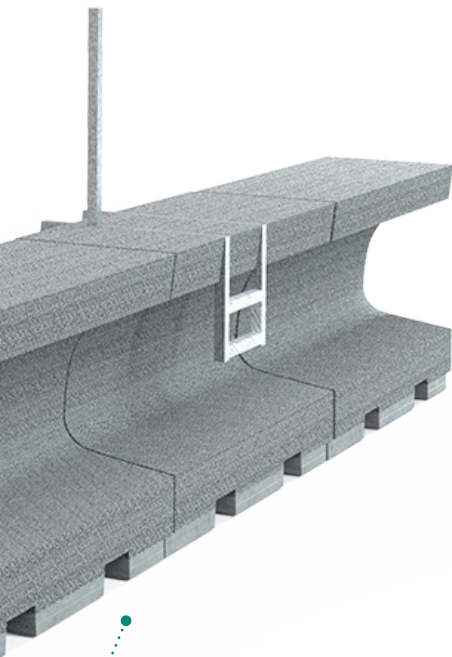


QUIE@RAIL

THE HIGHLY INNOVATIVE AND NEAR-TRACK NOISE PROTECTION

This innovative noise protection product is pioneering in economical and sound protection terms.

It protects residents and all traffic users from noise by absorbing rolling noise from trains. High walls and the resulting visual separation along railway lines are now a thing of the past. This also facilitates urban planning.



ECONOMIC EFFICIENCY

Quie@Rail does not require a concrete foundation, but is simply surface mounted on gravel. This reduces the overall costs of installation.

LOW IN HEIGHT - HIGH EFFECTIVENESS

Despite the particularly low height of the Quie@Rail elements, the sound level reduction is extremely effective. The sound insulation effect has been proven on site and also in the sound chamber in accordance with the applicable standards.

CROSS DRAINAGE

For each 2-metre element, 2 drainage openings are integrated on the bottom side, which can also be used for installation or removal.

LONG DURABILITY

The monolithic concrete construction enables a maintenance-free solution with long-term durability.

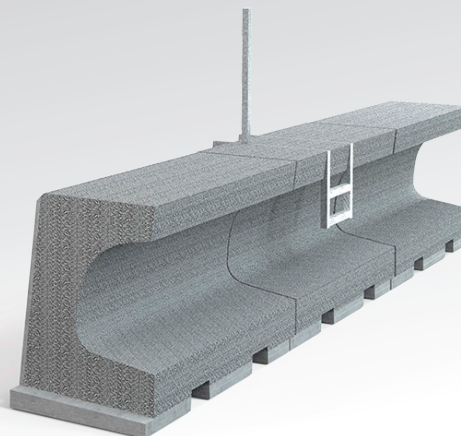
ADVANTAGES for the railway operator

1. Low construction costs, short construction times – high degree of prefabrication and efficiency
2. No obstacle e.g. during track tamping
3. No maintenance required
4. No earthing – therefore no possible copper theft
5. Positive image due to highly innovative product
6. Easy and safe evacuation of passengers due to low height and crossing aid ladders



PHONOBLOC® QUIE@RAIL NOISE PROTECTION FOR RAILWAY LINES

Near-track positioning and high efficiency make the low Quie@Rail noise barrier a convincing solution.



KIRCHDORFER
ROAD & TRAFFIC

DELTABLOC®
HOME OF ROAD SAFETY

DELTABLOC INTERNATIONAL GMBH

Kirchdorfer Platz 2
2752 Wöllersdorf
Austria
office@phonobloc.com
+43 57715 470 0
deltabloc.com