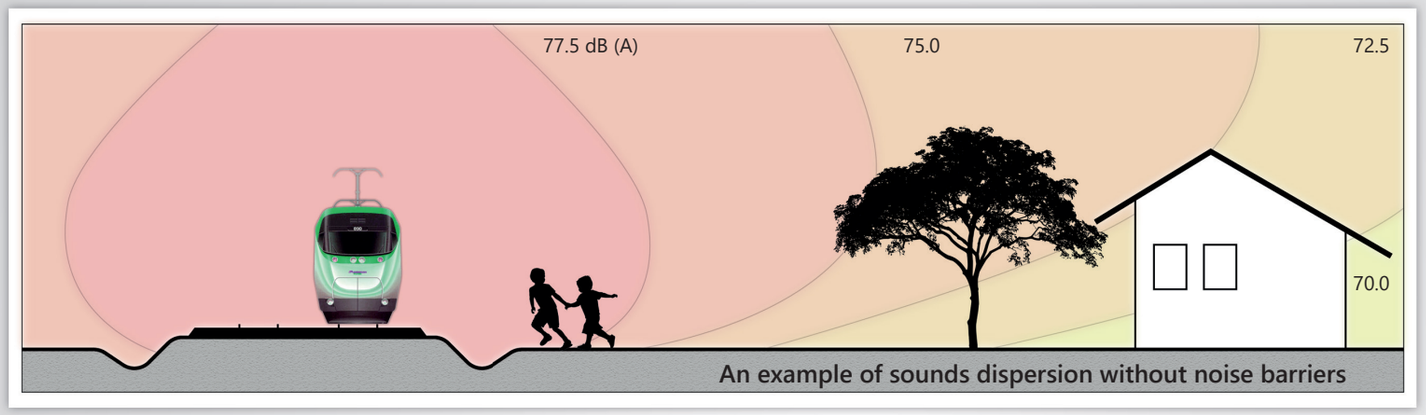
FEAL

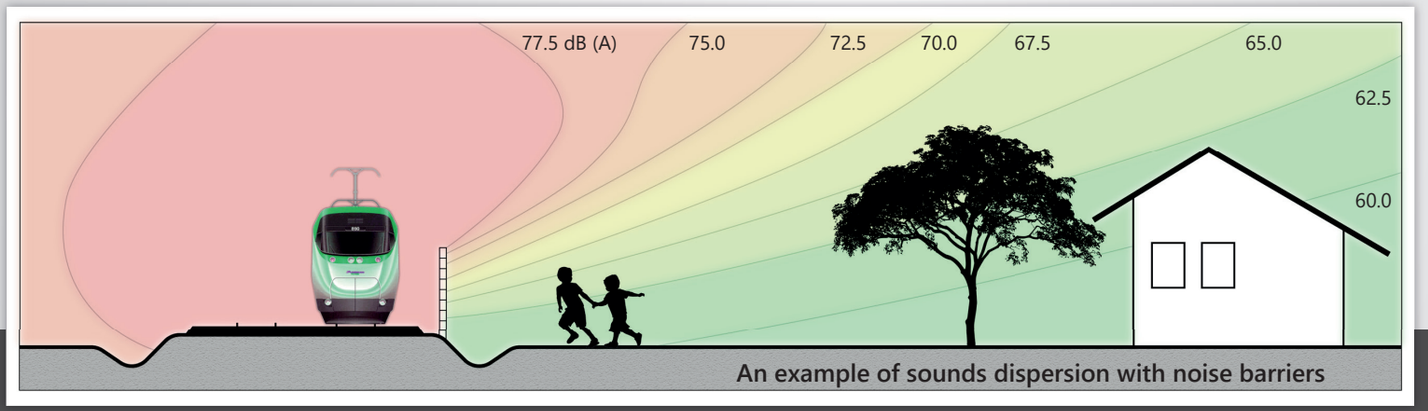


FEAL'S NOISE PHALANX PANELS AND OTHER COMPONENTS IN RAIL INDUSTRY

Noise is one of the main causes of degradation of life quality, especially in urban environments where it is constantly present and affects on many aspects of everyday life. The purpose of implementation of protective walls against noise is to alleviate the consequences of noise pollution in urban areas and create a positive environment for people's lives. The designer chooses location of the protective walls, the height of the walls and the noise absorption quality, based on the noise calculation model.

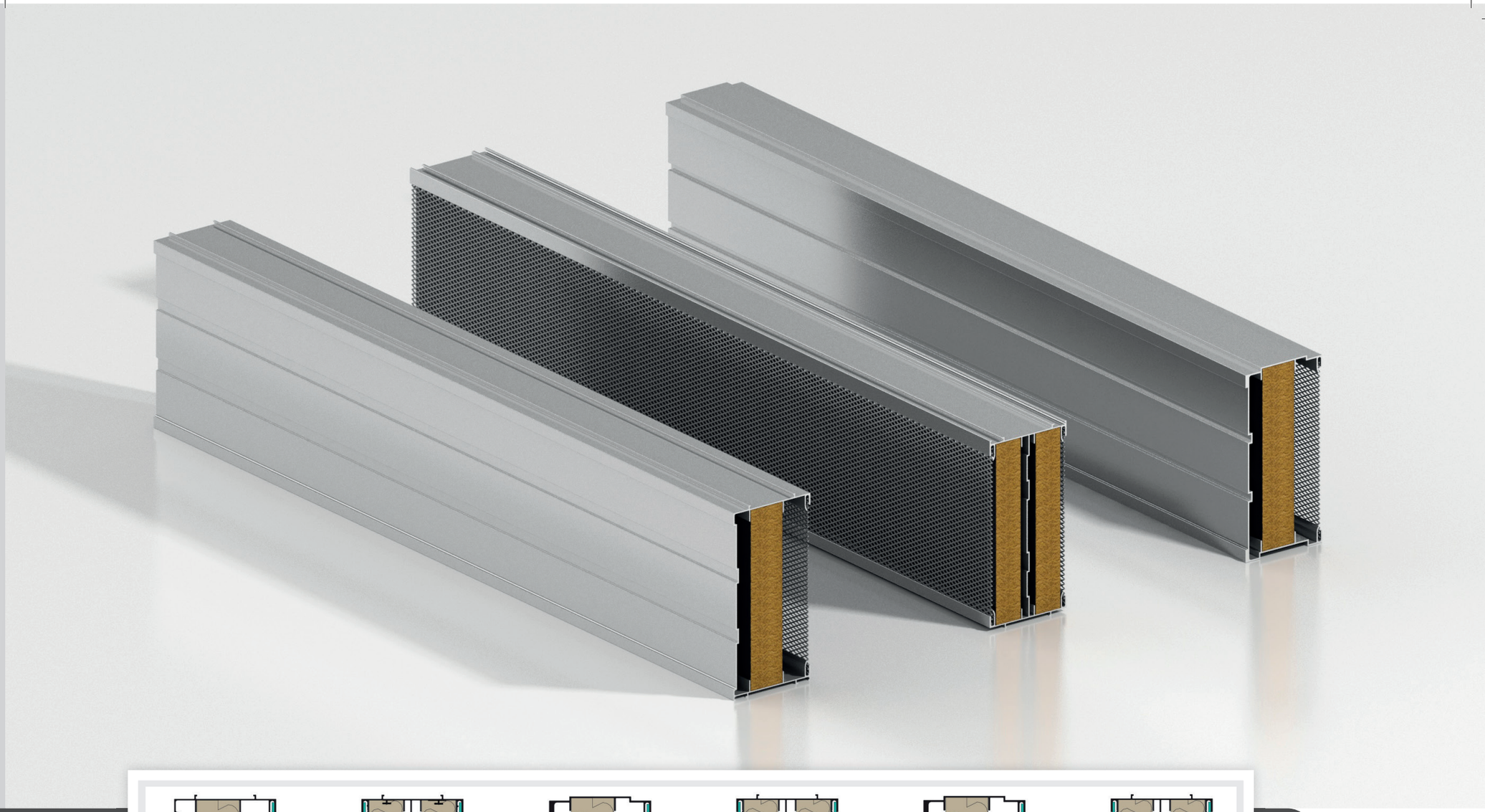


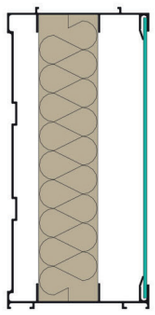
An example of sounds dispersion without noise barriers



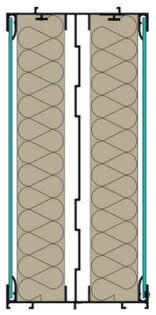
An example of sounds dispersion with noise barriers

Noise barriers placed directly on the roads (road or rail) are the most common and safest way to reduce the noise distribution. By applying a suffi cient height and adequate length barrier, immediately after the installation, the effect of reducing the noise level at the projected level is achieved. Appropriately selected barriers can reduce the noise level up to 15 dB, while transparent elements can go according to the requirements. In addition to noise protection, the noise barriers are also a safety barrier between the railway line and the surrounding area (providing protection from uncontrolled passage across the rail). On request, FEAL's panels that is a noise control system can be provided with a special layer of anti-graffi ti coating that facilitates easier removal of graffi ti. Elements are developed according to German standards: Die RIL804.5502 and for all elements FEAL has an EBA (Eisenbahn BundesAmt) approval. The panels are assembled without any connective materials and with their construction they provide maximum elasticity while retaining the function.

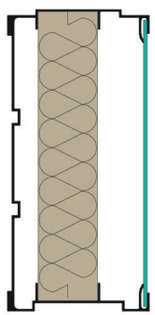




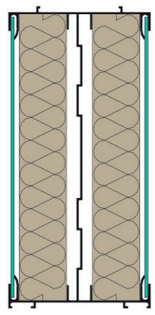
Single Noise PhalanX panel for speeds up to **160 km/h**



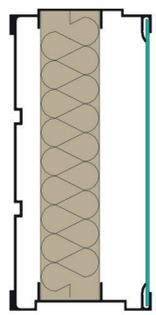
Double Noise PhalanX panel for speeds up to **160 km/h**



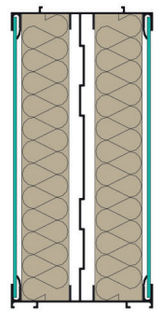
Single Noise PhalanX panel for speeds up to **200 km/h**



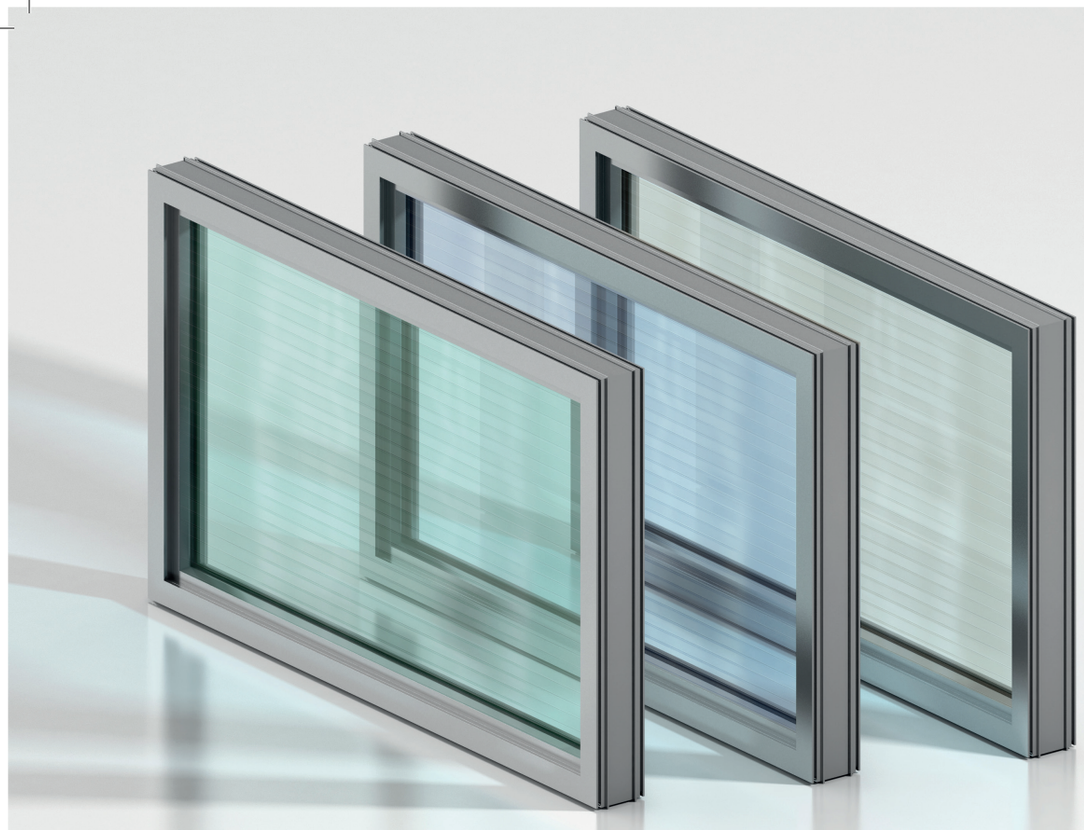
Double Noise PhalanX panel for speeds up to **200 km/h**



Single Noise PhalanX panel for speeds up to **300 km/h**



Double Noise PhalanX panel for speeds up to **300 km/h**





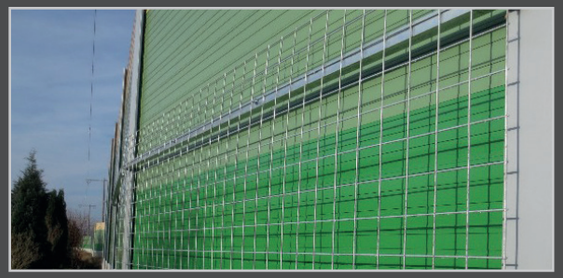
YOUR KEY BENEFITS:

- High stability
- Individual design
- Reduces the noise level up to 15 dB
- Simple to install
- Improves quality of living

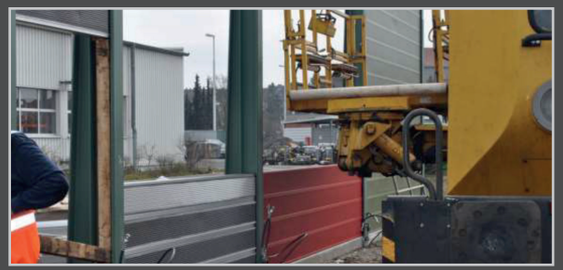


ESCAPE AND SERVICE DOORS

For the purpose of maintenance, we produce service (access) doors that are an integral part of our offer and are compact with the noise barriers. We offer single and double-wing doors tested on the speed of trains up to 300 km/h.



Trellises are also part of the supply and can be an integral part of the partition wall and serve for climbing plants and in this way the partition wall is much easier to fit into the environment.

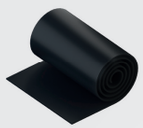


HOW TO INSTALL THE NOISE BARRIER

The noise barrier assembly is made on already set up foundation of the beam and between the positioned steel girder.

Prior to assembly, the concrete foundation must be clean and on it a foamed EPDM strip is placed, that serves as a distancer between aluminium panels and concrete girder. At the ends of the aluminium panels the assembly EPDM connection elements are installed. The circuit of panels and connection elements are inserted between the two steel H-girder, followed by setting of alu-packers for the fixture of the elements.

Alu-packers or levelers are inserted into the assembly EPDM elements. With their insertion a fixed position of the element is ensured while maintaining its elasticity. The same procedure applies to the following panels, and after a certain number of installed panels (depending on the project) a inox ground elements are placed, which are placed reciprocally-side by side. When the installation panels are completed, the protective alu-caps are installed on steel H-girders.



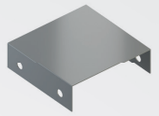
VORLEGEBAND



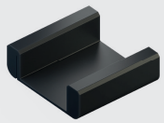
INOX ELEMENTS
for ground mounting



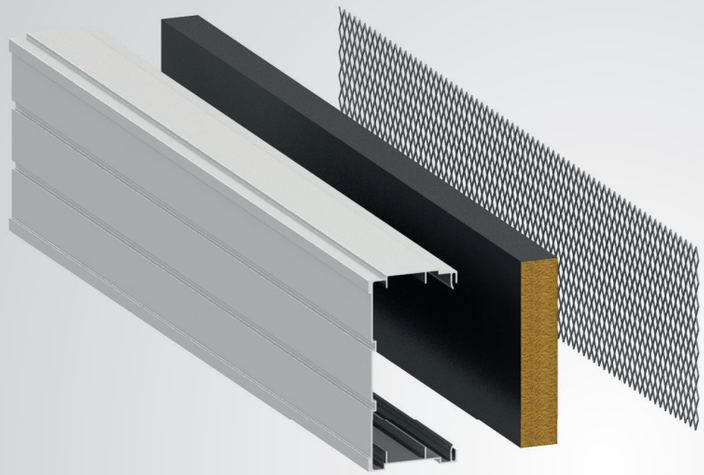
ALU - PACKERS
2 mm, 3 mm, 5 mm

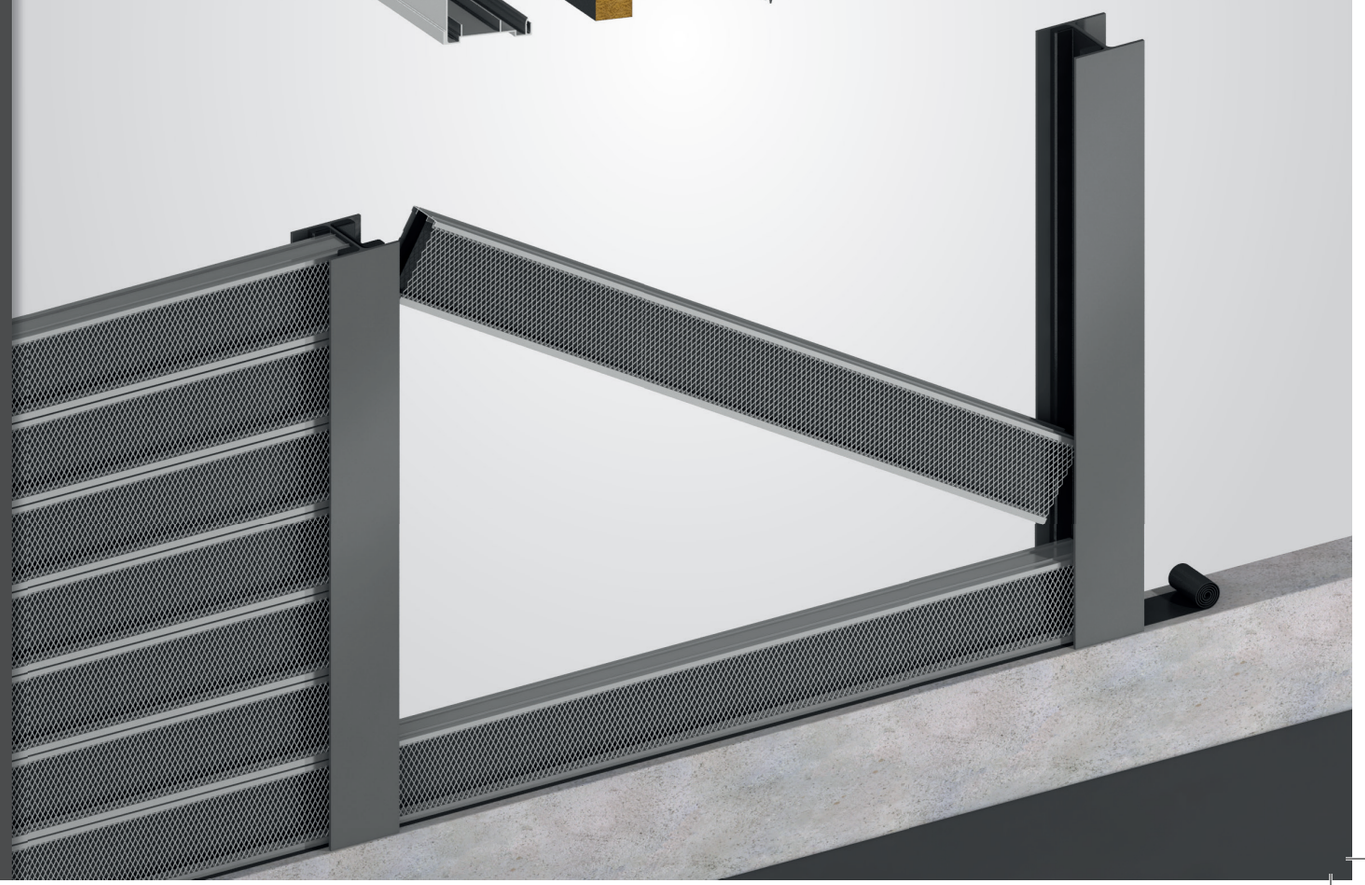


ALUMINIUM COVER CAP
powder coated

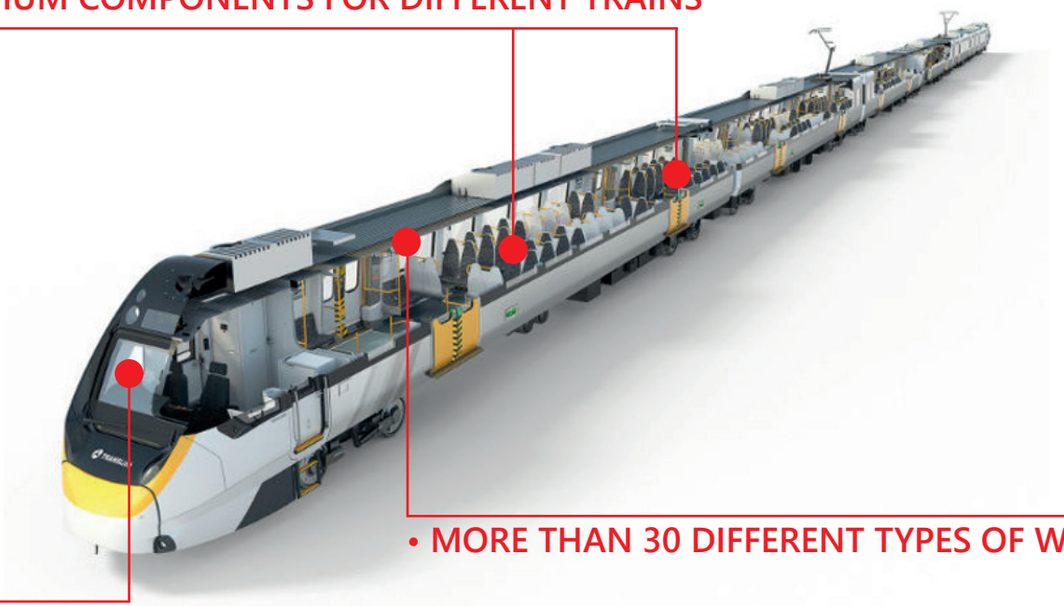


EPDM
connection elements
for steel girders





• MORE THAN 4000 DIFFERENT ALUMINIUM COMPONENTS FOR DIFFERENT TRAINS



• MORE THAN 30 DIFFERENT TYPES OF WINDOWS

• MORE THAN 10 DIFFERENT TYPES OF WINDSHIELDS



In the field of industrial profiles, FEAL focuses on the automotive, truck and railway industries. FEAL is a well-known manufacturer of aluminum profiles and components. Our long-term customers include Deutsche Bahn, Bombardier, Siemens, Alstom, Saint-Cobain, Flachglas Wernberg GmbH and many more.

Quality and traceability of the production chain we control by the standards that prescribe standards ISO 9001 and CE mark.

In the whole production chain, we are using modern technology and means of protection, and we continued to control the standard requirements of ISO14001: 2004, which is the guarantor of our concern for the environment.

We own certificates of ISO 3834 and 15085-2, which allow us to perform demanding welded aluminum structures. Our products with surface coating, are manufactured under the certificate Qualicoat and Qualanod. We test the quality of finished Feal system in accredited laboratories across Europe.



Photo: Stev Betz, DB Bahn Bau Gruppe GmbH

BUREAU VERITAS 1828 · TÜV NORD · GSB INTERNATIONAL · QUALITY LABEL INTERNATIONAL Qualanod ARCHITECTURE · QUALICOAT SEASIDE · IRIS™ Certification · ekopak GREEN DOT

FEAL

FEAL

FEAL AUSTRIA - Facade Engineering and Aluminium GmbH
Konrad-Doppelmayr-Straße 17, 6922 Wolfurt, Austria
Tel.: +43(0)5574-62230; Fax: +43(0)5574-61989
E-mail: info@feal.at

Feal Deutschland GmbH
Kemptener Str. 99 88131 Lindau
Tel.: 0049 8382 504 9393; Fax.: 0049 8382 504 9390
E-mail: info@feal-deutschland.de

FEAL d.o.o Široki Brijeg
Trnska cesta 146, Široki Brijeg, Bosna i Hercegovina
Tel:+387 39 704-269; 705-807; 705-636; fax+387 39 704-358
Email: info@feal.ba Web: www.feal.ba

www.noise-phalanx.com

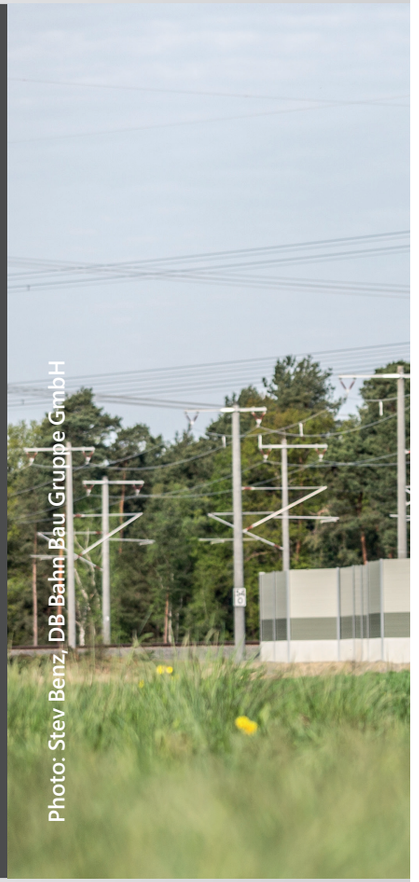


Photo: Stev Benz, DB Bahn Bau Gruppe GmbH