

Rockdelta applications

The natural solution for every track

Armed with unique material characteristics and unmatched, proven long-term functional performance, Rockdelta mats significantly aid the attenuation of ground-borne vibrations stemming from any type of track system. Vibrations are attenuated thanks to a mass spring system which decouples the dynamic behaviour of the track effectively from the ground.

Rockdelta mats are designed, tested and manufactured to have an extended lifetime with retained functional performance even under extreme conditions. This helps ensure the exceptional long product life cycle of Rockdelta mats.

The right choice

Based on knowledge and experience and according to the project requirements and specifications our Rockdelta experts help you to choose the optimal solution for each situation in terms of stiffness, vibration reduction and cost effectiveness.



Rockdelta RB: Vibration control for ballasted tracks

High-performance, dual density Rockdelta mats with a composite geotextile top layer are the effective solution for resiliently supported ballasted tracks.

The dual density mats consist of a high-density force-distributing top layer and a low-density soft, resilient bottom layer. The top layer also provides even and equal stiffness throughout the entire width of the track and distributes force from the rail structure evenly.

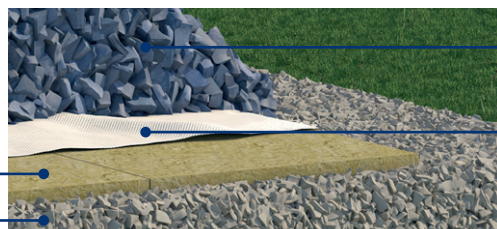
The high-density top layer protects the mats from potential impairment by the ballast stones, preventing the stone wool fibre material from deteriorating due to the static

and dynamic loads from gravel, stone, soil and other covering materials. The low-density resilient bottom layer provides optimal spring-mass effect. Also, it enables installation on surfaces that are not completely evened. The functionality of the mat is not affected by punctures.

The geotextile layer on top with high resistance to stretching and tearing enables easy maintenance of the ballast. This geotextile is a high-quality composite product, comprising two membranes of non-woven geotextile and a load-distributing core.

Rockdelta RB

track substructure



ballast layer

protection geo-composite layer



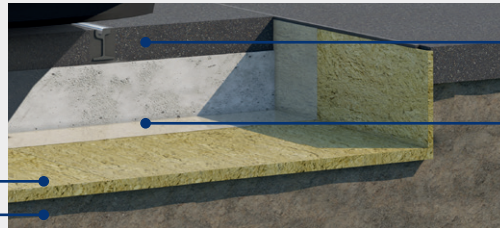
Rockdelta RX: Vibration control for concrete slab tracks

The Rockdelta solution for slab track systems consists of a full-contact single-density mat that decouples the concrete slab from the substructure. The resilient stone wool-based support system introduces a durable and high-efficiency spring element into the track structure. By separating the concrete slab from the foundation, the dynamic behavior of the system is changed by creating a mass-spring system where vibrations are attenuated thanks to the elasticity of the mat.

The mats provide for the attenuation of ground-borne vibrations stemming from any type of floating slab track system. The unique material characteristics include very low levels of damping and unmatched, proven long-term functional performance. With ultra-low sensitivity to weather conditions (rain, temperature changes) Rockdelta mats exhibit outstanding efficiency and durability even after decades of operation under harsh climatic conditions.

Rockdelta RX

slab substructure



track finishing layer

separation layer

Rockdelta RG: Structure protection for all track types

Rockdelta offers superior ballast, sub-grade and bridge deck protection. The Rockdelta solution for structure protection (i.e. bridges, viaducts, etc.) is a single density, force-distributing stone wool mat with unmatched dynamic properties with inherent, first-rate volume compressibility.

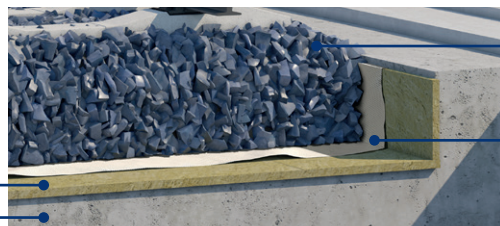
permanent way from the railroad formation to reduce ballast attrition, prolong the life of the ballast bed and limit maintenance activities by improving the distribution of the acting dynamic forces in traditional ballasted railways and bridges.

Rockdelta mats may as well protect the track superstructures against dynamic forces and extend the life of the ballast stones by reducing attrition, thereby enhancing overall ballasted track performance while significantly reducing maintenance costs. Rockdelta mats may be used as well for decoupling the

The exceptionally strong mats have a geotextile top layer with strong resistance to stretching and tearing. The mats are lightweight and have no significant influence on the total weight of the superstructure they are installed on.

Rockdelta RG

bridge deck/
ballasted track
substructure



ballast layer

protection layer
geo-composite