

## MAINTENANCE AND LCC

Based on their components, rail dampers have a long life cycle and need no maintenance. After the wear limit dampers can be easily dismantled and recycled.

In case of a track replacement the dampers can be dismantled quickly, put aside the track and reinstalled on the new track.

**Installed systems: > 600.000, worldwide**

**Test tracks: > 10,000 (Switzerland, Belgium, Denmark, France, USA, Australia)**

Rail grinding does not interfere with rail dampers since their components are heat resistant.

Tamping machines can also operate without interference.



Tamping machine



Rail grinding



## RAIL DAMPERS

Innovative noise mitigation on railways



Schrey & Veit

Shock, Vibration & Noise Control

Schrey & Veit GmbH

Graf-von-Sponheim-Str. 2 | D-55576 Sprendlingen | Germany

Phone: +49 (0) 6701 205 84-00 | Fax: +49 (0) 6701 205 84-10

[www.sundv.de](http://www.sundv.de)



Schrey & Veit

Shock, Vibration & Noise Control

[www.sundv.de](http://www.sundv.de)

# INNOVATIVE NOISE MITIGATION ON RAILWAYS

## RAIL DAMPERS

Rail dampers are based on the latest technologies to reduce broadband railway noise at its source. The vibration level within the rail during a train passing by will be damped. The Formation of rail corrugation will be reduced significantly.

To achieve maximum noise reduction, dampers need to be adapted to the individual shape of a rail at first (e.g. UIC 60).

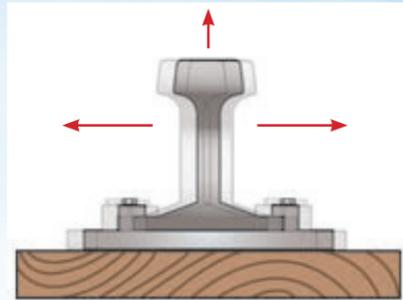
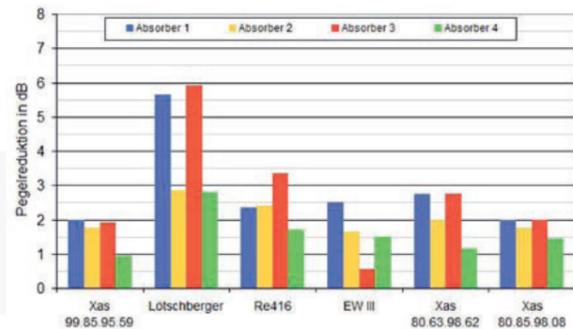
*Different measurements on various tracks including > 600.000 assembled rail dampers worldwide proved an average noise reduction of 2-6 dB(A).*

In the next step dampers are mounted on a test track in our laboratory. A passing train is simulated by exciting the rail with a special shaker.

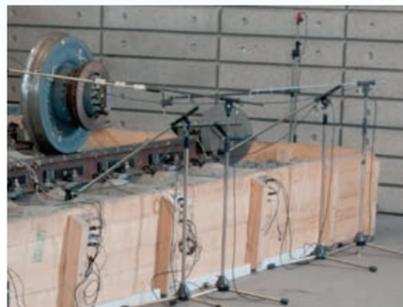
Finally dampers are tuned to reduce emitting noise best possible at corresponding frequency range. The individual tuning of dampers enables application on all kinds of tracks such as ballasted track, ballastless track and high speed tracks.

*Performance of different rail dampers during various passing trains*

*Source: Stieglitz/Czolbe: „Effectivity of rail dampers“, Speech DAGA 2012, Prose AG*



Vibration of rail



Test track in our laboratory



Tuned Dampers assembled on ballast track



Tuned Dampers on ballastless track

## ASSEMBLY OF RAIL DAMPERS

First a minor quantity of ballast will be removed with a ballast clearing tool controlled by a road rail excavator at front side.



At the same time the excavator draws a supply unit of rail dampers for distribution on the track and assembly can start right away.



Rail dampers are aligned mechanically with common t-bolts only. The bolts are tightened by a motor driven sleeper screw driver and can easily be dismantled that way (e.g. change of rails).



It takes an average manpower of 18 track workers to assemble 300 m/hour (track). By deploying 3 teams of that size an average output of 1,000 meters/hour is possible.

