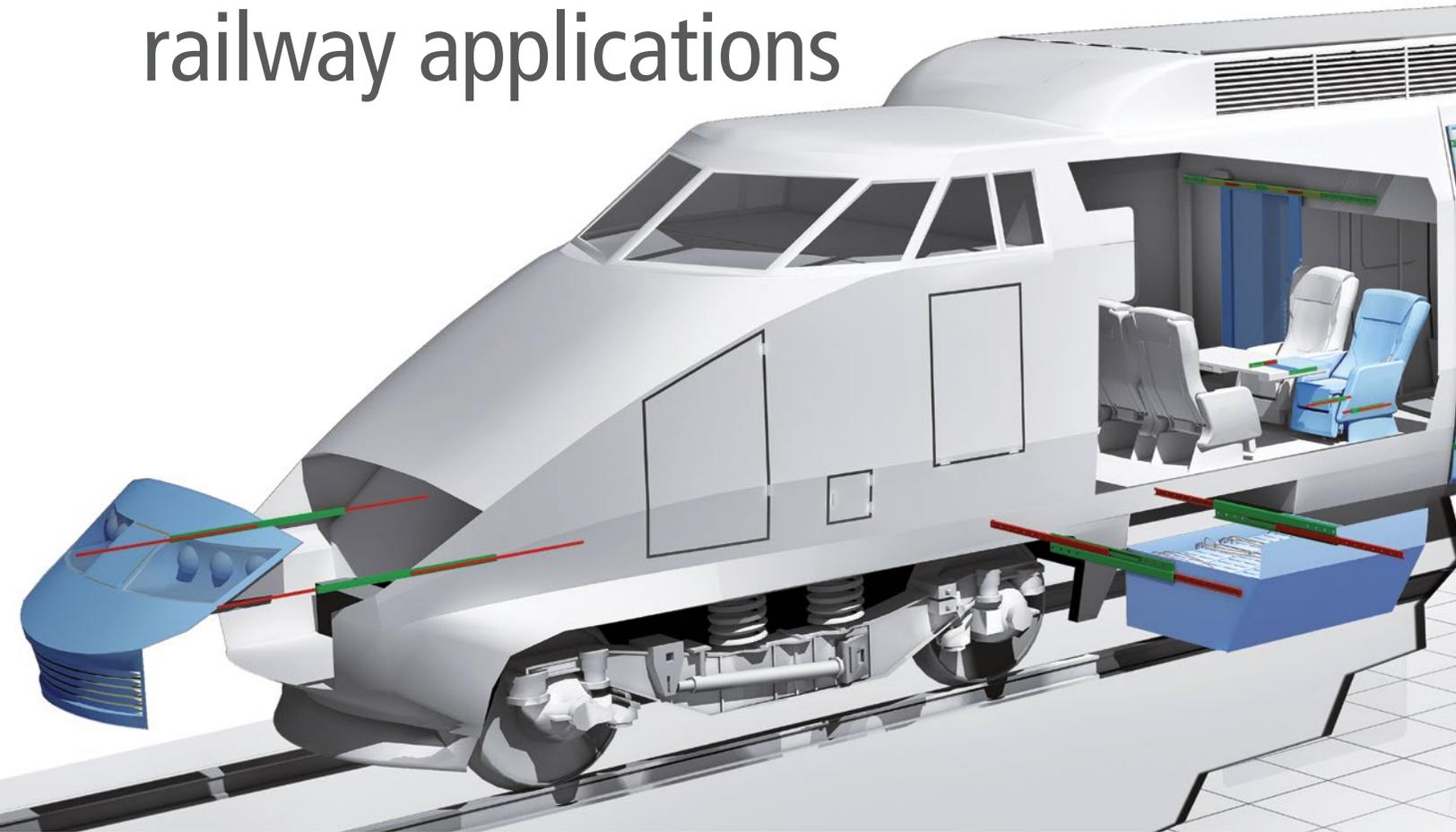


# ROLLON: Linear solutions for railway applications



**B**orn in 1975, Rollon is an international company with headquarters in Italy and a worldwide presence specialised in the production of linear guides, telescopic guides and linear axes. The deep experience in designing solutions for high demanding applications of linear motion in industrial machines and automation sectors increased Rollon's mechanical know how. The know how has then been applied to several industries such as railway, aerospace, medical, logistics, special vehicles and furniture with successful applications in different fields.

Railway is one of the most important industries for Rollon applications and the solutions coming from the Italian company are used all over the world

in several applications regarding the trains and, generally, the railway industry. On October 2015 Rollon will attend to the International Railway Equipment Exhibition (IREE) in New Delhi, introducing its solutions dedicated to Railway applications, such as door openings, seat movement, removal of battery packs and underfloor air conditioning systems. Behind every application is an efficient and reliable product which responds to the needs of the manufacturer. Every solution is carefully selected on the basis of the specific needs and main critical areas of the application. Moreover, where necessary, Rollon designs made-to-order products for its customers. Such an ability is the strength of this Italian company, thanks to its internal R&D

department.

Rollon's offering is based on the prevention of risks, thanks to products designed according to the specific needs of each application, capable of drastically reducing the impact of such events. Vibrations, weather conditions, intensive use and corrosion are the factors contributing to malfunction in mechanical parts. Rollon linear guides for the railway sector are designed and made specifically to manage these factors and prevent the potential related risks.

Reliability and efficiency are ensured by the strict certified quality controls to which every component produced in the factories is subjected, based on the UNI EN ISO 9001:2008 standards.

Lastly, all Rollon components used in applications for different types of trains



Linear and telescopic rails from Rollon are used in a wide range of applications in railway industry.

**ROLLON**<sup>®</sup>  
Linear Evolution

are crash tested with deceleration of up to 5 g.

#### Rollon applications and products for the railway sector

Rollon has developed products that are suitable for numerous applications inside, outside and in the space below the train.

Inside the train, we find Rollon guides in the movement of hallway and toilet doors. Here, the EASYSLIDE series is used since it ensures excellent sliding quality, thanks to the ball cage system, and a long life, thanks to induction-hardened raceways. For toilet doors with a curved trajectory, Rollon has specially devised the CURVILINE series of curved roller pin guides capable of non-linear motion with a fixed or variable radius.



Curviline is a curved roller pin guides capable of non-linear motion with a fixed or variable radius.

Rollon guides are even mounted on tables and seats. The COMPACT RAIL roller pin series is the best choice in terms of the quietness and sliding quality it guarantees, thanks to the grinding process undergone by the guides' raceway. Their compactness is suitable for even small spaces. It is available in different sizes: 18mm, 28mm, 35mm, 43mm, 63mm with a max. operating speed of 9 m/s and roller pins lubricated for life.

External applications are the access doors and the automatic retractable step that bridges the gap between the train and the platform. In this case, linear guides need to be able to withstand heavy loads, with minimum bending and maximum resistance to shocks, vibrations, intensive use, corrosion and wear. Rollon offers two main solutions, both with hardened raceways: the ASN telescopic rail series and the SNK recirculating ball bearing linear guides.



**Compact Rail is a linear guide with rollers that provides smooth and silent movement. It has hardened and ground raceways and it can manage significant misalignment.**

Moreover, for applications involving the expulsion of the external door unit, Rollon recommends a pair of guides from the COMPACT RAIL series, capable of absorbing any misalignment issues. In all these cases, Rollon guides are tested to endure for over 2 million cycles, thus responding to the requirements of even the most demanding players in the sector.

Lastly, for the underfloor segment, telescopic guides are used to remove the battery pack and air conditioning equipment. In both cases, continuous

vibrations and shocks have a negative effect on the removal components. The Rollon telescopic rail guides in the DSS series are the most suited to dealing with this kind of issue. These are compact guides with hardened raceways and vertical intermediate elements and which are capable of ensuring extreme rigidity and minimum bending even when subjected to very heavy loads. DSS series has a maximum load capacity of 4908 N. Usually they're used in pairs, with an overall maximum load capacity of 9816 N. Reduced bending means the manual process of removing components is made much easier and comfortable for operators.

#### **Anticorrosion treatment**

Corrosion caused by humidity and aggressive agents like salt is one of the main issues affecting mechanical railway components. Rollon has tested and proven the effectiveness of several types of anti-corrosion treatments by using the salt spray fog test in accordance with the UN/ EN ISO 9227 standard.

The test guide rails are placed in a test chamber and sprayed by means of a nozzle for the entire duration of the test with a sodium chloride solution (5%) with pH 6.5 and a temperature of 35°C. The quality of the surface protection is measured according to the time of the test and the resistance to corrosion. RollonAloy is an anti-corrosion surface treatment that ensures the functionality and reliability of linear systems, reducing maintenance costs. Guides treated with RollonAloy resist up to 720 hours in salt spray fog, way beyond the expectations of even the most demanding manufacturers.

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