



Established - 1990



Shock absorbers for railway application

MSA is one of the world leader companies in the manufacturing of shock absorbers for railway vehicles.

Among our customers you can find the most important companies manufacturing railway vehicles, operators and leasing companies as well as the most important national railways in the world.

Our customers appreciate MSA shock absorbers for the reliability of its product, the delivery performance, and the after sales service.

MSA shock absorbers production includes all railway applications:

- Vertical dampers for primary and secondary suspensions
- Horizontal and lateral dampers for primary and secondary suspension
- High technological yaw dampers for standard trains and high speed trains
- Inter- cars dampers
- Electronically controlled dampers



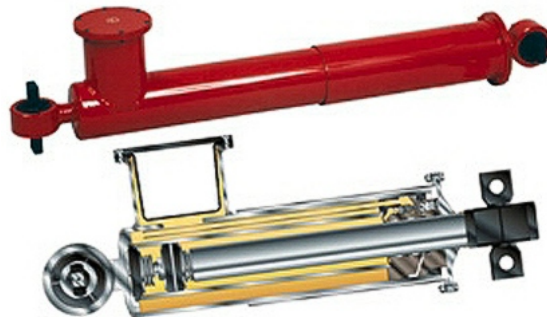
SIGRA

ROLLINGSTOCK COMPONENTS

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Thanks to a flexible manufacturing system and a wide experience in the realization of different projects, our distinctive competence is our ability to best customize our offer, producing tailor-made products that can meet the most particular and special requirements provided by the project, and in particular:

- Dimensional structure (open, close, stroke) with a wide range of solutions which allow to meet customer's needs respecting the original project
- Upper and lower joints with elastic devices of different shape and manufacture in vulcanised rubber in order to guarantee an excellent durability of radial and torsional stiffness
- Hydraulic functioning provided by the project with survey of damping forces at the velocity test which are significant for the customer with realization of prototypes.



Proptech®: the special valve Proptech® grants a linear absorption of dynamic energy and a rapid answer of the valve system. This permits to increase of 30% the standard of comfort and safety compared to previous products.

Shock absorber main function is increasing passengers' comfort but they are also an important safety element. In order to guarantee reliability and a long working life strict quality controls are made on each shock absorber, **this allowed us to get the UNI-EN ISO 9001:2000 certification while welding processes are made according to the German rule DIN 6700**

MSA offers a wide range of shock absorbers for pantograph suitable for each kind of necessity. Our shock absorbers for pantographs are developed in our laboratories and submitted to very strict tests.

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