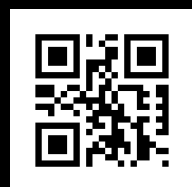
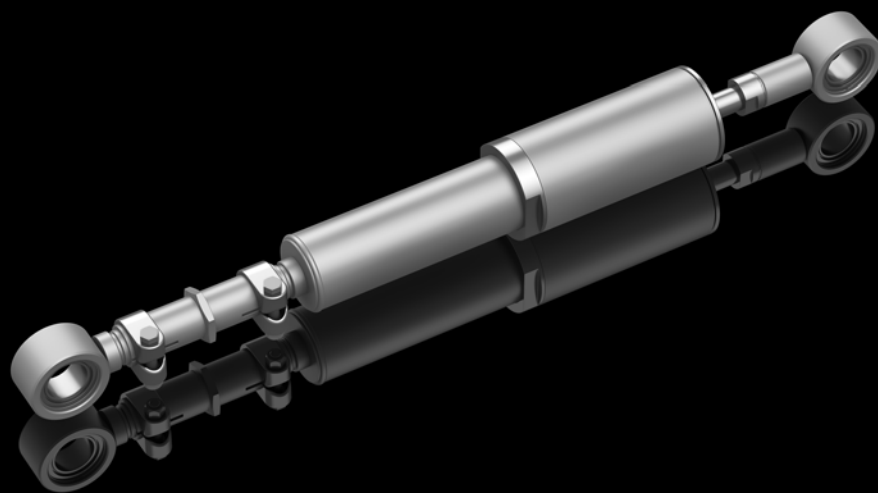


SPRING-DAMPER ELEMENT

ZF INTER-CAR DAMPER



MOTION AND MOBILITY

INCREASES COMFORT AND SAFETY



Thanks to its innovative technology, this new product can be mounted in the most compact installation space.

Rail vehicles nowadays are subject to a constant optimization process to increase driving comfort and operating safety. ZF has developed a spring-damper element especially for the corridor connection that controls or dampens relative movements. It is mounted between the bodies of the rail cars which helps the movements of the cars compensate for one another. In other words, the movements are harmonized because the cars are decoupled from one another.

Technical Data

Size	T50/28
Stroke	freely selectable
Tube Ø	110 mm (variable depending on the design)
Length setting	+/- 15 mm (or acc. to customer spec.)
Damping force	max. 10,000 N / 0.1 m/s
Spring force	max. 50 kN (or according to customer spec.)
Weight	approx. 21 kg (depending on the design)

HIGHLIGHTS

- Cost-efficient thanks to its modular design
- Absolutely maintenance-free and therefore low LCC
- Elastomer spring element in the rebound / compression direction
- Broad range of damping and spring characteristic curves is possible
- Low necessary installation space
- Tolerance compensation thanks to the adjustable length in the vehicle



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SHIFTABLE YAW DAMPERS

ZF DAMPERS FOR RAIL VEHICLES



MOTION AND MOBILITY

STANDARD AND ELECTRICALLY CONTROLLED



Yaw dampers control the sine wave effects of the bogie, increasing safety at medium and high speeds.

The yaw damper is not required for stable operation when maneuvering curves or tight track curves. In fact, the wheel/rail forces generated by the yaw dampers in this case often cause wear on the track in the turns and on the wheel flange. For this reason, ZF developed the electrically controlled yaw damper (with the option of integrated switching point monitoring) that clearly reduces contact forces by shutting down the valve. This considerably reduces the maintenance costs for vehicle and track sections caused by wear.

Technical data

Size	T70/28
Valve type	2/2-way seat valve, normally closed (deenergized) magnet-actuated, pilot controlled
Operating pressure	350 bar
Ambient temperature range	-40° C to +60° C
Operating time	100 % (uninterrupted service)
Type of protection	IP68

HIGHLIGHTS

- Short design
- Reduces wheel/rail wear
- High dynamic rigidity
- Actuation can be freely selected by the customer



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