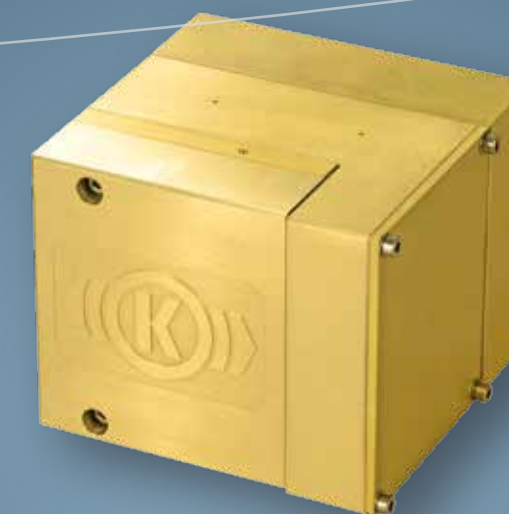


RAIL
VEHICLE
SYSTEMS
EP 1001

P-1282-EN 09/2014



EP1001 – Wheel Slide Protection for Freight Wagons

Knorr-Bremse Systeme für Schienenfahrzeuge GmbH

Moosacher Straße 80
80809 Munich
Germany
Tel: +49 89 3547-0
Fax: +49 89 3547-2767

WWW.KNORR-BREMSE.COM



APPLICATIONS

Freight wagons with bogie mount applications, including: tank, hopper, container flats plus small diameter wheel specialist wagons.

RAIL IMPACT DAMAGE SIGNIFICANTLY REDUCED RESULTING IN . . .

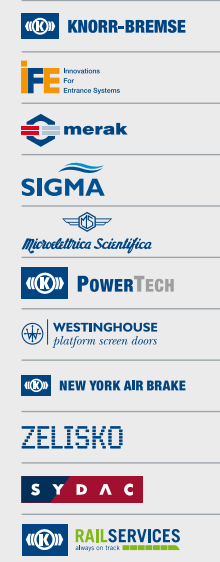
- Extended rail life
- Increased operational safety
- Risk of network system disruption is reduced
- Reduced wheel/rail noise levels
- Reduced rail repair/maintenance costs

WHEEL TREAD DAMAGE REDUCTION RESULTING IN . . .

- Extended wheel life
- Improved braking performance
- Increased operational safety
- Reduced wheel/rail noise levels
- Reduced wheel repair/maintenance costs
- Reduced risk of derailment
- Reduced, "slow running" penalty costs (as a result of exceeding track impact force limits)

ENVIRONMENTAL BENEFITS

Track side noise levels reduced due to the decrease in wheel "flats" and track damage.



APPLICATIONS

Most Bogie Freight Wagons (new and retrofit)

EP1001 FROM KNORR-BREMSE



EP1001 CAN BE FITTED TO NEW BUILD WAGONS, AND IN MOST CASES RETROFITTED TO EXISTING VEHICLES. The system provides a solution to the potentially dangerous, disruptive and expensive problem of wheel “flats” which can occur during braking.

This can be caused by poor rail/wheel adhesion conditions, or due to an incorrect load weigh signal, resulting in over-braking.

SYSTEM FEATURES

- Self powered WSP system suitable for most freight wagons
- Operates with either tread, inboard axle disc or wheel disc actuation.
- Small, compact and low weight
- Fast and easy to install, with no inter-wagon connections
- Options available for either twin or single pipe operation
- Suitable for variable load or empty/load applications
- Major servicing interval 7 years
- Low power technology removes the need for batteries
- Options available for inboard or outboard axle bearing configurations
- System performance available via download
- Developed exclusively for freight wagons

THE EP1001 MECHATRONIC FREIGHT VALVE (MFV)

The EP1001 MFV control valve is at the heart of the WSP system and uses a combination of advanced mechanical and electronic technology (mechatronics).

This technology has been specifically developed for freight brake control applications and features integrated electronic control and power management.

The features and benefits that the MFV delivers are significant when the compact size and weight of the unit is considered.

THE EP1001 MECHATRONIC AXLE-END GENERATOR (MAG)

The EP1001 Mechatronic Axle-end Generators provide dual functionality, axle speed sensing and power generation.

The MAG has been specifically designed for freight wagon applications.

The MAG consists of mechatronic technology to deliver high performance and reliability in a small, light weight package.

The use of mechatronics eliminates the requirement for a separate power supply or battery, with all the associated weight, reliability and replacement cost issues, enabling the direct delivery of axle speeds and power generation to the MFV.



EP1001 Mechatronic Freight Valve (MFV)



EP1001 Mechatronic Axle Generator (MAG)



EP1001 Health Status Indicator (HSI)

THE EP1001 HEALTH STATUS INDICATOR (HSI)

The EP1001 HSI is mounted on the outside wagon frame and provides the operator with a display showing “healthy” or “not healthy” system status.

Additional information such as “wagon distance travelled” can also be included in the display, as an option.

System performance can also be downloaded from a unit connector port.

THE EP1001 HAND-BRAKE INTERLOCK SYSTEM (HBI)

The H/B Interlock system is an optional sub system which prevents the freight train from pulling away if the H/B is applied on the wagon fitted with HBI.

Ensuring “wheel flat” damage, as a result of a dragging brake, does not occur.

The H/B Interlock consists of a mechanical/pneumatic sub system that automatically vents Brake Pipe pressure on the offending wagon, ensuring that service brake is not released on the train.