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«(C)» MERAK

«®» MICROELETTRICA

«(C)» SELECTRON

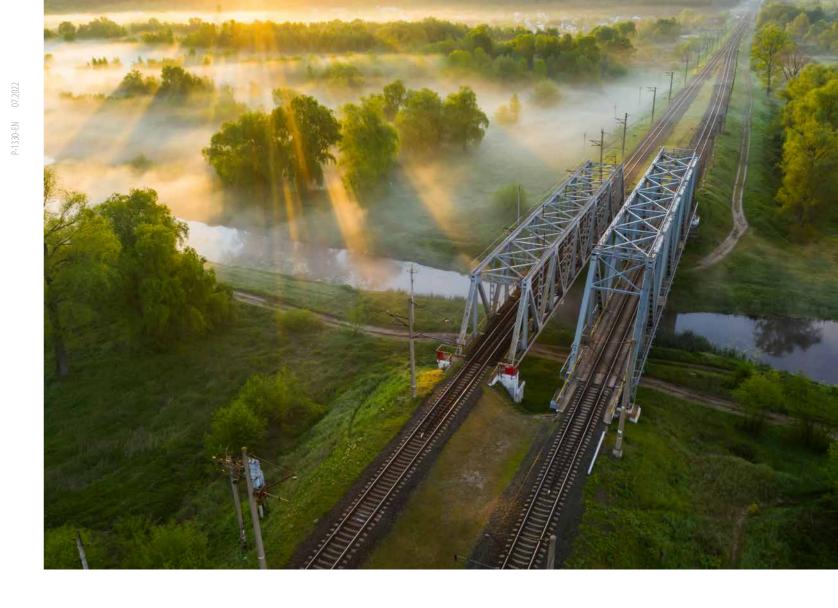
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AUTOMATIC COUPLING SOLUTIONS

MAKING MOBILITY SAFE – KNORR-BREMSE'S DAILY MISSION.



Product focus: Coupling systems – future-ready couplers for passenger and freight trains





Overview

- Coupling systems combines KB's long-standing tradition in coupler manufacturing^[1] with the company's current positioning as a market leader for innovative rail systems
- The coupling systems business unit was re-established in 2019
- Coupling systems combines the passenger train and freight car coupler businesses
- Knorr-Bremse couplers combine outstanding quality with a focus on maximum safety and high availability
- Knorr-Bremse's "future-ready" approach is rounded off by a customer-oriented service offering that combines global presence with local service centers and field service for short response times

Key locations

Munich (DE)

- НО
- Lead Engineering
- Sales & BusinessDevelopment

Budapest (HU)

- Engineering
- Production

Current and future product areas











^{[1] 1960 –} Unicupler AK69e and 1990 – Z-AK



Couplers for passenger trains: Modular target portfolio enables delivery of all relevant coupler types

Passenger train target product portfolio: Automatic center buffer coupler "AutoLink", Semi-permanent coupler "ShortLink" and Adapter coupler "RescueLink"

Mechanical heads

- Mainline (HS/ MU): T10 (TSI)
- Metro: T25 & T35 & T330 & T130
- LRV: T430 & T530
- Others on request

Electrical couplers

- Scalable standard sizes (top-, bottom- and side-mounted solutions)
- Customized to requirements

Electrical coupler operating mechanisms

- For side-, top- and bottom-mounted electrical couplers
- All solutions include self-locking function

Draftgear (reversible)

- EFG3
- EFG3 with shear-off
- Gas hydraulic
- Polymer Pad Articulation

Draftgear (irreversible)

- Deformation tube
- Deformation tube behind bearing bracket

Vertical support & centering

- Solution with combination of deformation tube and shear-off
- Pneumatic solution

Pneumatic valves

- MRP
- BP for 1- and 2-position heads

Additional functions

- Pneumatic system for 1- and 2-position heads
- Heating systems

Additional products

- Condition monitoring & CBM
- Standards-compliant Type 10 adapter
- Lightweight Type 10 adapter
- Other adapter solutions on request
- Wear gauges
- Semi-permanent eyebolt connection

Couplers for freight trains: Knorr-Bremse drives introduction of the Digital Automatic Coupler (DAC)



FreightLink Digital Automatic Coupler

- Digital Automatic Couplers (DACs) facilitate rail freight automation and enable connected, trainwide functionalities
- The DAC plays a key role in Knorr-Bremse's strategy to make modern rail freight transportation fit for the 21st century
- DACs will form an integral part of Knorr-Bremse's overarching "automated digital freight train" offering, which includes innovative solutions that combine DACs with core Knorr-Bremse competencies such as braking systems, digitalization and automation
- Knorr-Bremse is a member of all relevant national and European bodies
- Like all Knorr-Bremse couplers, our Digital Automatic Couplers and compatible locomotive couplers are developed in Munich and Budapest

