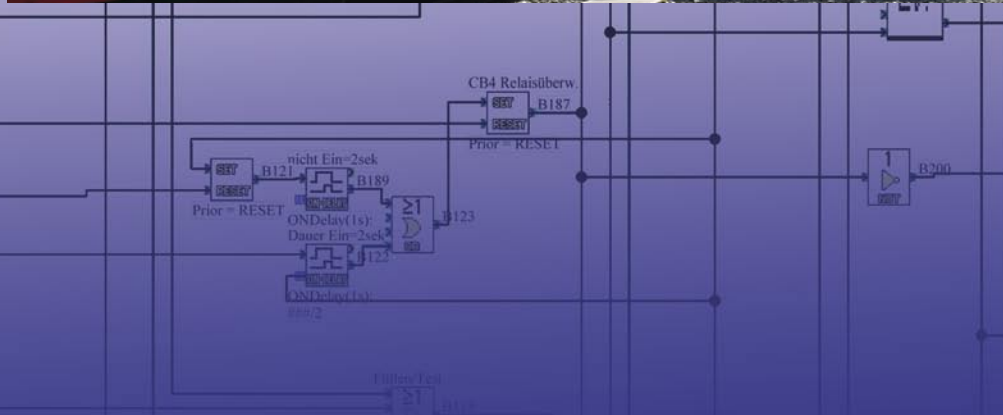
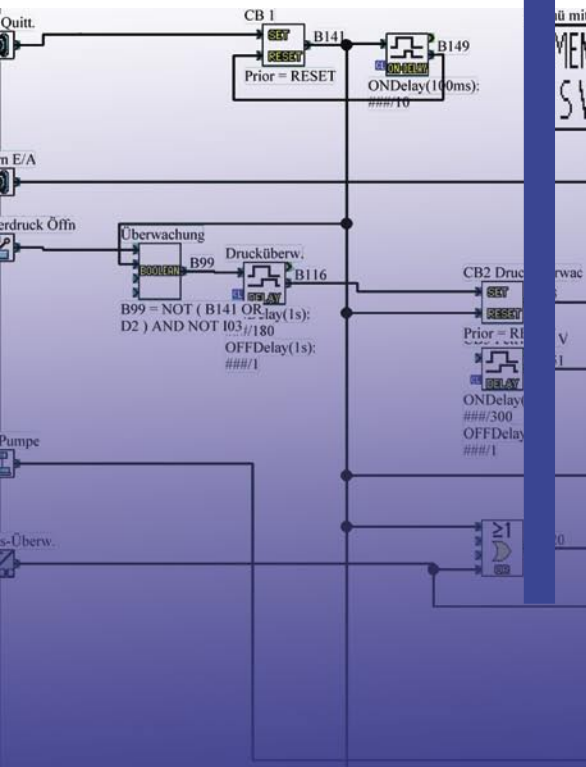




moklansa
SKBS

Electronic
rail head wetting system



Familiar problems

In spite of all the latest technological developments, points and bends are still the most sensitive areas in rail transport. Worn tracks, point rails, check rails and wheels cause trouble for operators, are often very noisy and disturb passengers and people living nearby.

This is where intelligent lubrications can help, and moklansa is one of the pioneers in efficient track lubrication systems. For many years, the **moklansa E3S** electronic rail lubrication system has proven its worth in continuous use for state-owned railways, private rail operators, local transport companies and industrial enterprises at home and abroad.

The result is a significant reduction in wear, leading to longer service life and much less cost and effort for repairs. Noise is also reduced, although sometimes not to a satisfactory extent.

Always striving for new solutions

Our aim must therefore be to stop the extremely irritating screeching caused by friction on the tracks. This is why we have now come up with the ideal solution for very fine wetting of the rail head: the **SKBS electronic rail head wetting system** ensures that trains travel quietly on bends.

This system is also based on a logical principle: precisely metered lubricant wets the surface of the inner rails on the bends exactly where the relative movement of the wheel causes high-pitched screeching.

These are the main elements of the **SKBS** rail head wetting system:

- Very fine wetting of the rail surface with extremely economical metering
- Improved control system with additional monitoring
- Safety monitoring which only allows specified procedures and prevents over-lubrication

The system has been certified for the first time by the technical inspection agency of the district authority of Düsseldorf.



targeted and sparingly applied





Improvements to crucial details

Lubricant supply

Using a special drilling technology, the rail is equipped with ducts which open exactly on the rail head.

Hydraulic circuit

We have improved the hydraulic circuit so that the lubricant can be much more precisely metered. Only a third to a half of the usual amount is needed. This reduces repair costs and does less harm to the environment.

Monitoring system

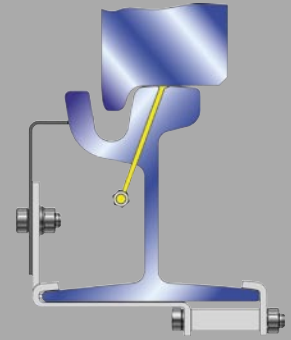
The function of the system is continuously supervised by a monitoring system which operates separately from the PLC. It logs all the activation times of the pump and stores the data for 31 days.

Safety control system

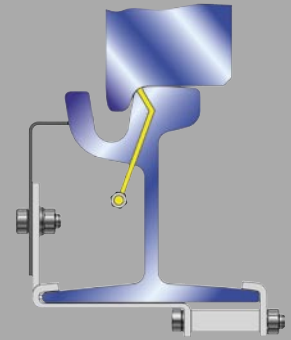
The software-based inspection of the pump activation time is monitored by an additional safety circuit with a timer relay. This means the tracks cannot be overlubricated, because if the specified pump activation time is exceeded, the system is switched off and can only be started again after the power supply has been interrupted.

Optional combined use

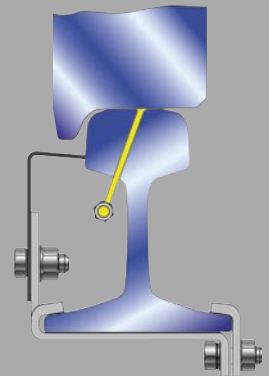
Rail head wetting with the moklansa SKBS can also be ideally combined with a rail flank lubrication system such as the familiar moklansa E3S. This ensures maximum reduction of noise and wear.



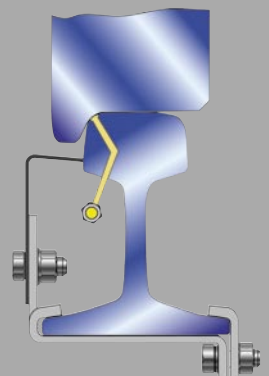
Grooved rail profile:
rail head wetting duct
of the inner curved rails



Grooved rail profile: lubrication channel
for rail flank lubrication
of the outer curved rails



Vignol rail profile: rail head wetting duct
of the inner curved rails



Vignol rail profile: lubrication channel
for rail flank lubrication
of the outer curved rails

Brake test during the admission phase

Rail head wetting
on inner rails



Braking sand



Start of
braking distance



Cabinet design



Box design



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Overview

Dimensions

Box design
1 or 2 grease reservoirs
Cabinet design
1 or 2 grease reservoirs

Housing box W 800 x D 600 x H 350 mm
Mounted on base, jig or installed in ground box.
Housing cabinet W 800 x D 450 x H 1100 mm
Mounted on foundation, concrete plate or light concrete base.

Power supply

230 V/AC, 24 V/DC, DC/DC converter 400... 1050/24 V
Solar-powered or replaceable battery pack.

Controller

Compact PLC with key operation, operating states and inputs can be read on the display. Function diodes, potential-free contact for remote transfer.
Monitoring for data logging, separate from the PLC
Monitoring of pump activation times using independent timer relay.

Vehicle detection

Inductive proximity switches, installed in a sensor terminal box or a sensor unit.
Alternatively: external signalling.

Grease reservoir

Dual-chamber re-usable vessel with roller membrane technology, capacity 12 litres, effective volume 9 litres, design pressure 16 bar.

Designed, manufactured and tested in accordance with directive 97/23/EC of the European Parliament

Lubricant conveyance

Directly to the contact faces via specially drilled ducts in the rail.

Lubricant

KUB 1 K-30 with further improved coating properties and extremely low consumption. Particularly suitable for coating the head if the dosage is accordingly low.

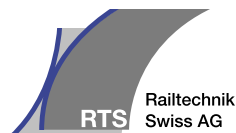
If other manufacturers' products are used, we recommend a compatibility test with the polymers used.

Options

BCD-coded interfaces for data exchange.

Complete data exchange including alarm chain with GSM technology.

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