

BIJUR DELIMON
INTERNATIONAL

*Stationary
or mobile*

Railway Lubrication 

Wheel flange lubrication system:

Railjet

When underground trains, trams and railway trains run from one station to the next with a low noise level, this is often due to Railjet, the mobile wheel flange lubrication system of DELIMON. It reduces to a minimum friction and wear at both wheel flange and rail.

By means of compressed air, the lubricants are sprayed onto the wheel flanges - and while the train is running, automatically transferred via the rail flanks on the wheel flanges of the following wheel sets.

Control system

The DELIMON wheel flange lubrication system Railjet is provided with an electronic control system, make Siemens, as standard. The drive of the metering pump is possible in three ways:

1. In case of the path-dependent drive, the spraying pulse is initiated via an existing path signal from the vehicle control system or via an additional transmitter. The path intervals between the spraying pulses are programmable and thus freely selectable.
2. The time-dependent drive triggers the spraying pulse after expiration of a programmable pause time.

3. In case of the arc-dependent drive of the metering pump, an inclination angle transmitter triggers the spraying pulse. Here, only the starting wheel flange area is lubricated.

The metering pump can of course also be controlled directly from the vehicle. In this case, the DELIMON control system is not installed.

Principle of operation

The lubricant stored in the depressurized tank is sucked in by the metering pump. Through a 2/2-way solenoid valve for the compressed air, the pneumatic metering pump is started automatically. A defined quantity of lubricant is delivered into the compressed air, then carried via the flow divider to the spray nozzles and from there applied onto the wheel flanges. All spray processes are triggered by a freely programmable control system.



Railjet



Inclination angle transmitter



Specification

Supply pressure / compressed air	max. 10 bars
Working pressure / compressed air	4 to 10 bars
Capacity of lubricant tank	4 / 6.5 / 10 / 13 / 18 l (other tank capacities on request)
Quantity of lubricant metered by the pump	0.1 cm ³ / Spraying pulse
Spray duration (control-dependent)	adjustable
Lubricants*: - oils	service viscosity 20 mm ² /s up to 2.500 mm ² /s
- liquid greases	NLGI-class 000, others on request
Temperature range: - mechanical parts	-30° C to + 70° C
- electrical control unit	-30° C to + 70° C
Mains voltage	24 V DC / 110 V DC (other voltages possible)
Power input 24 V DC / 110 V DC per solenoid valve	10 W
Power input 24 V DC / 110 V DC control unit	55 W
System design	according to IEC 571

* Biodegradable lubricants can be used. For lubricants with solids content, please consult our specialists. Lubricant lists will be sent you on request.

Advantages

- 5 to 15 % saving in driving energy
- Reduction of wear by up to 80%
- Cost reduction due to greater reprofiling intervals
- Preservation of environment by noise attenuation

And still more: Even biodegradable lubricants can be used the low weight of the spray nozzle of 265 g only clearly facilitates the installation and the adjustment the intelligent electronic control allows the adaptation to all operational requirements.

Railjet



A (no) magic word: Engineering

For more than 125 years DELIMON has been developing and manufacturing centralized lubrication systems. And just like the progresses that have been made in the railway technology, the stages of development in the DELIMON railway technology are visible, too. Not without good reason, for the traditional company always orientates itself towards the technical progress. So it happens again and again that the specialists of DELIMON are asked for very special solutions for the field of the railway traffic engineering. And again and again the engineers and the designers, the product specialists and the service men are in a position to offer appropriate, precise solutions. Such developments, however, do not come by chance. They are rather the result of a corresponding strategy:

- Market and product study form the basis of all further considerations
- The concept is developed, the strategy plan is established.

"Perfectly happy"

This is the opinion of some of our customers who decided for the Total Lubrication Management of DELIMON. With this innovative service, DELIMON assumes the responsibility for the sector "centralized lubrication" - also in the railway traffic engineering - and guarantees

- increased process safety
- less failures
- reduced energy costs
- less rework
- conformance
- cost saving

And even more: In addition to this, the Total Lubrication Management guarantees the value-increasing efforts of its own employees ... less administration ... and everything from one hand ... throughout Germany.



- The product conception is worked out.
- After completion of the product test, the production starts.
- The products are checked for the possibility of being improved.

When DELIMON is today able to present - among other things - the "Q1 certificate", this is also the expression of a special orientation towards the customer and the confirmation of its innovative business policy.

With the Total Lubrication Management, you get an overall concept for

- lubrication systems
- oils and greases
- choice of the system and dimensioning
- preventive maintenance
- applications engineering and service
- documentation of maintenance and care
- cleaning and waste disposal
- stock keeping and stockpiling

that is orientated towards your requirement.

Clear advantages for you as user: an increased system availability, a quality-assured process and reduced process costs.



Worldwide operation: even in customer service.

In which branch, wherever on the globe innovate centralized lubrication is needed: DELIMON is close by. With local branches, distributors and partners in cooperation. In Europe, Asia and overseas. Always with specialist service teams who speak your language. Try us.

... in over 50 countries worldwide.



Stationary track lubrication:

When track systems are exposed to heavy loads, when the use of the same causes much noise, StaTrack is employed:

- in track systems with narrow curve radii
- in case of grooved rails in the free and closed track bed in the public road system

StaTrack

StaTrack - decentral

The decentral system feeds distributed points in the trackage. It works with a central grease pump. It delivers the lubricant via a high-pressure line directly to the lubrication points of the rail. For double-track systems, two pumps that work independently of each other can be installed in one cabinet.

StaTrack - central

The central system with many tracks on a small area is installed for example in industrial yards, in the entrance and exit of the car shed. Due to progressive distributors it is possible that the individual tracks are supplied with lubricants via a common pump. The connection of a track and the apportioning of the lubricant are effected via so-called track distributors on site. The progressive distributors allow a comprehensive monitoring of the system.

Control

The electronic switching facility detects via appropriate electronic sensors, e. g. sonar, via inductive proximity switches or via signals from the route control and/or

points control the number of vehicles. The lubricating cycle is triggered according to a programming. When it deals with a central system design, a field bus is used for the connection of the sensors and actuators.

Monitoring

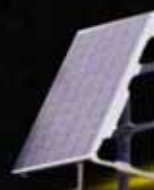
- by limitation of the operation time of the lubricant pump, if required.
- by an electrical level control of the lubricant tank
- by means of a centralized evaluation
- rain sensor, minimizes the lubricant consumption
- operational monitoring by progressive distributors (in case of StaTrack = centralized)

Design

- in the pump cabinet (as per choice) for single- and double-track systems
- as earth box usable by pedestrians - for single- and double-track systems
- as earth box usable by vehicles – bridge class 60 DIN 1072
- for gauge 1435 mm and 1000 mm or beside the track



Sonar contact



Solar module



Rain sensor





Operating conditions

Lubrifications points (per track)	up to 8
Max. delivery rate per lubrication point	0.6 cm ³ / min
Working temperature range	-20° to +40°
Consistency of lubricant	NLGI 2, 1, 0, 00, 000
Metered volume per outlet and revolution	0.1 cm ³
Mains voltage:	solar modul 24 VDC, 230 VAC, 400 VAC
	or contact-wire current inverter 230 VAC and / or 24 VDC
	400 VAC
Powerconsumption:	< 1kW
	< 2 kW

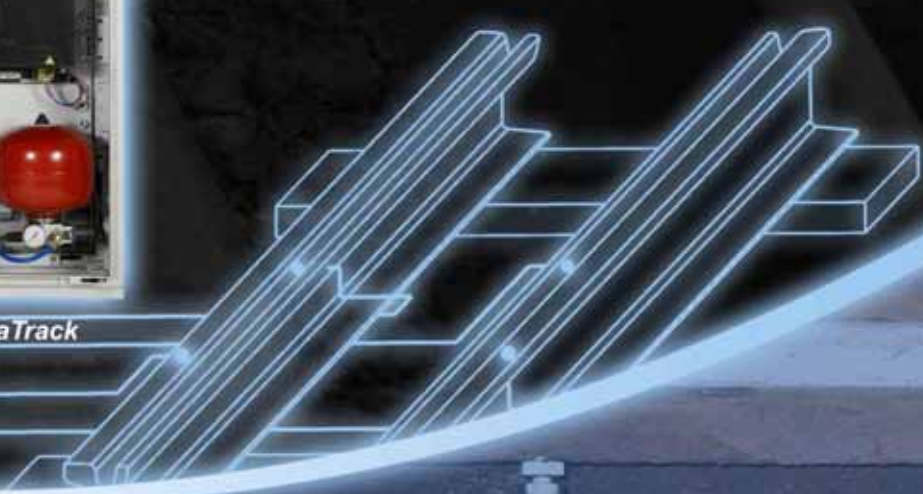
Advantages

- Reduction of wear at wheel and rail
- Reduction of noise to a minimum
- Biodegradable lubricants of good adherence can be metered precisely, therefore an environmentally friendly solution
- Lubrication times and intervals can be adapted to local conditions.
- minimal lubricant consumption
- increased reliability



StaTrack plus with interchangeable tank system

StaTrack



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