

# VOGEL Centralized Lubrication for Rail Vehicles

1-8090-US

Certified Q1 by DB AG



- Reduzierung der LCC (Life Cycle Costs)
- Erhebliche Verschleiß- und Geräuschminderung
- Energieeinsparung

Quality Management  
DIN EN ISO 9001:2000  
Environmental Management  
DIN EN ISO 14001



## ***VOGEL Wheel-Flange Lubrication Cuts Life Cycle Costs (LCC), Friction and Wear!***

- **Track resistance drops by 30 to 35 %, more energy available. No effect on traction or braking.**
- **12 to 15 % less energy consumed. Lower energy costs make themselves felt at once.**
- **Wear cut by 30 to 80 %. Longer intervals between reshaping or replacement of wheel sets and rails, maintenance time is minimized.**
- **Greater safety. Less danger of derailment because it is harder for wheel flanges to climb out of the tracks.**

***VOGEL systems are in use around the world. Our products provide solutions to problems in any operating conditions: Pin-point accuracy with no compromises!***

### **References**

#### **List of selected manufacturers**

Adtranz – worldwide	Deutsche Bahn AG	FIAT Ferroviaria	Linke-Hofmann-Busch
Bombardier – worldwide	DUEWAG	GEC Alsthom	Siemens Verkehrstechnik
Breda	DWA	General Electric	SGP
Casarlata	DIBAG-Werke	Kaelble-Gmeinder	

#### **List of selected users**

Amtrak	Conrail	Irish National Railways IE	Polish State Railways PKP
Algerian State Railways ARR	Danish National Railways DSB	Italian State Railways FS	S-Bahn Berlin GmbH
Austrian Federal Railways ÖBB	Deutsche Bahn AG	Japan Railways	Spanish National Railways RENFE
Belgian National Railways SNCB	Finnish RailwaysFR	Korean National Railways KNR	Swedish State Railways SJ
Berliner Verkehrsbetriebe BVG	French National Railways SNCF	Netherlands Railways NS	Turkish State Railways TCDD
Burlington Northern	Greek Railways OSE	Norwegian State Railways NSB	
Canadian National Rail	Hong Kong Metro	Peking Metro	

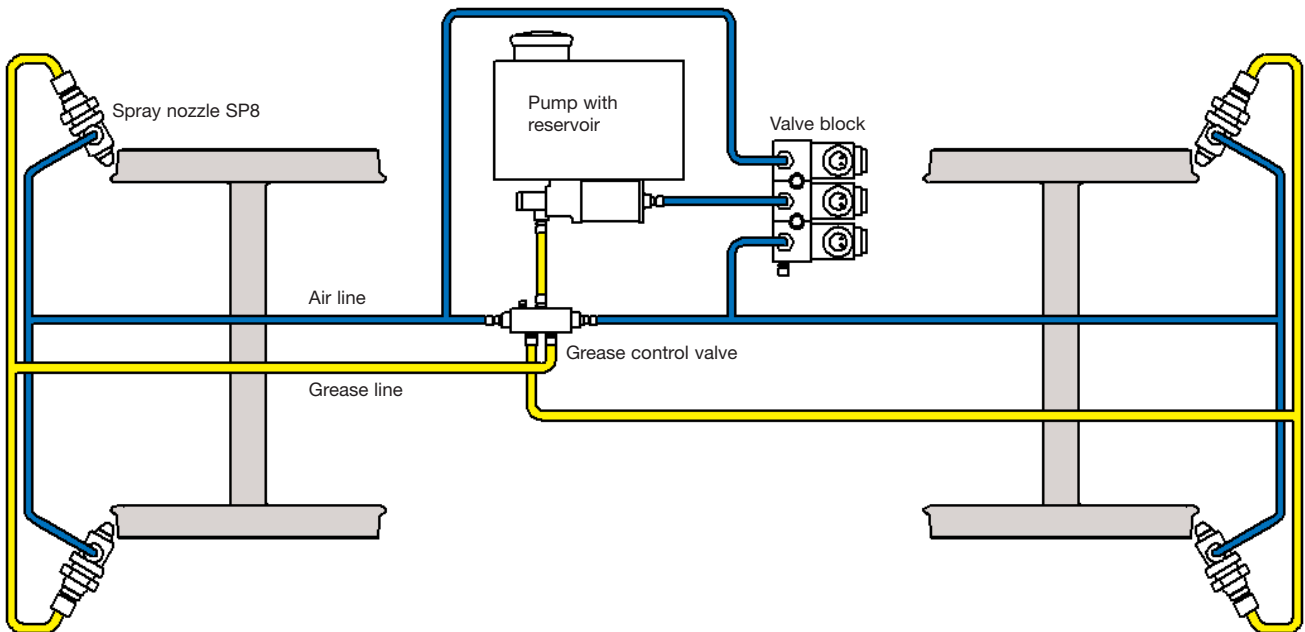


## SP8 – System with Pump

- Universally applicable system for line lengths up to 20 m (pump/nozzle).
- For a large number of nozzles.
- Lubricant supplied by a pneumatic grease pump with reservoir.
- Air/grease control unit for forward and reverse travel.
- IG666 electronic control unit.
- Curve and tilt sensor optional.

### Technical Data

System size	..... lines up to 20 m long (pump/nozzle)
Delivery pressure	..... 100 bars
Reservoir size	..... 5 or 25 liters
Temperature range	..... -25 to +80 °C
Lubricant	..... grease, NLGI grade 000 or 00
Metered quantities	..... 0.03; 0.05 ccm/spray



DG 1200 diesel locomotive

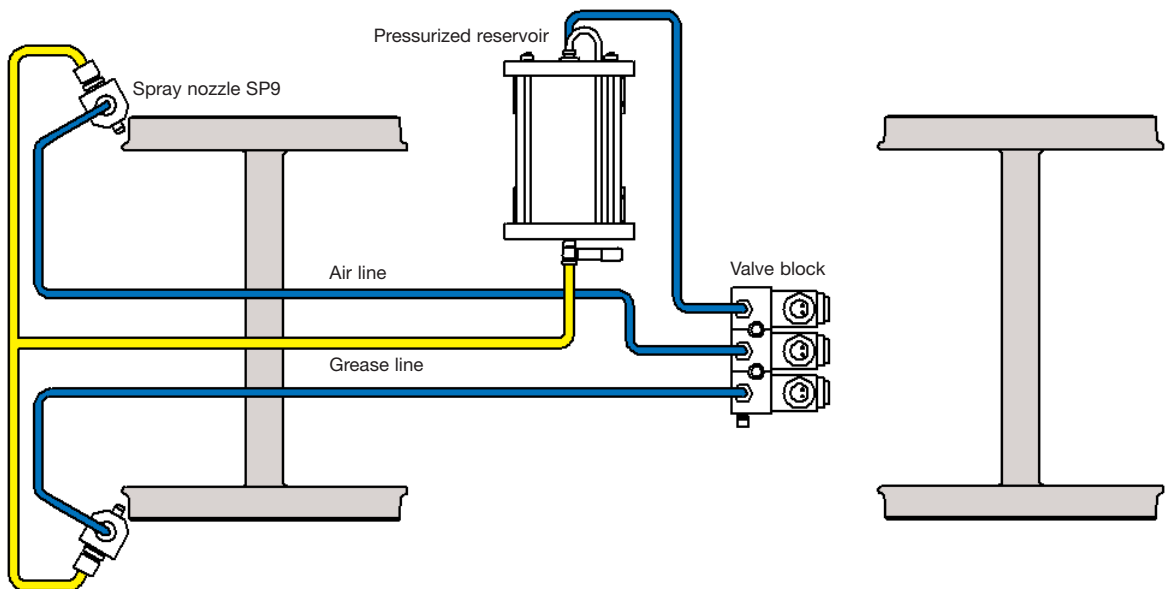


## SP9 – System with Pressurized Reservoir

- Compact system for line lengths up to 5 m (pump/nozzle).
- Pressurized grease reservoir BF4.5 can be installed close to nozzles.
- Separate actuation of nozzles possible, e.g. in curves.
- Combined wheel-flange / rail-head lubrication possible.
- IG666 electronic control unit.
- Curve and tilt sensor optional.

### Technical Data

System size	lines up to 5 m long (pumpe/nozzle)
Delivery pressure	8 bars
Reservoir size	4.5 or 6 liters
Temperature range	-25 to +80 °C
Lubricant	grease, NLGI grade 000 or 00
Metered quantities	0.03; 0.05 ccm/spray



IC Neitech / VT 605

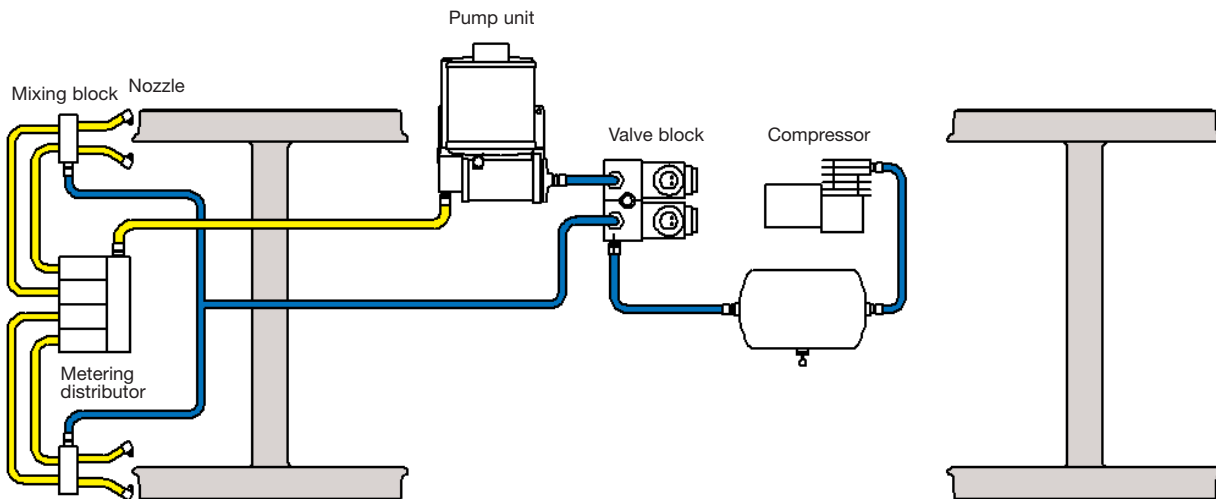


## System Tram – with On-Board Supply of Compressed Air

- Specially designed for streetcars with double nozzles for each wheel.
- On-board supply of compressed air for AC or DC current.
- Combined wheel-flange / rail-head lubrication possible.
- Pneumatically operated grease pump PEF-98.
- IG665 electronic control unit.
- Curve and tilt sensor optional.

### Technical Data

System size	..... lines up to 10 m long (pumpe/nozzle)
Delivery pressure	..... 38 bars
Compressed air	..... 5 bars
Reservoir size	..... 3 or 6 liters
Temperature range	..... -25 to +80 °C
Lubricant	..... grease, NLGI grade 000 or 00
Metering (adjustable)	..... 0.01-0.2 ccm/spray



### Line Lubrication

- Optimal supply of entire railway network
- Distance or time dependent lube actuation

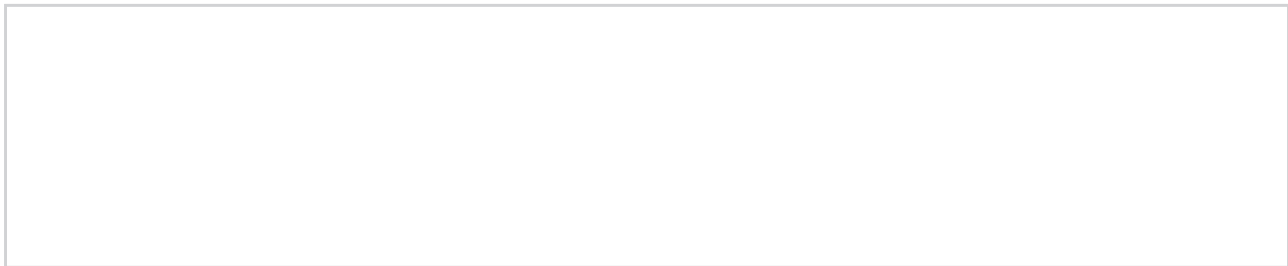
### Curve Lubrication

- Lubrication only in critical area of curves
- Wear-free electronic curve sensor
- Low lubricant consumption



IG665, IG666, IG667 control unit





A brand of the SKF Group

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