

INA Slewing Rings with integrated Yaw Dampers in VAL 208 Trains



Examples of Application Engineering

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VAL 208 metro train

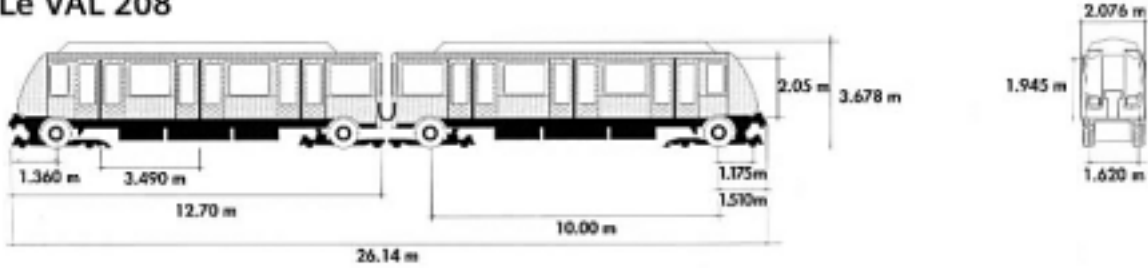
Photo: Courtesy of Siemens AG

Supervised from an operation control center, the VAL (Véhicule Automatique Léger) is the first fully automated, driverless metro system. Ever since it was first put into service in Lille in 1983, this urban metro system has been continually brought up to the state of the art with regard to comfort,

reliability and safety. The new generation of the system, VAL 208 and VAL 258, is used both in metro systems and by airport shuttle services. The powerful propulsion and the improved adhesion resulting from rubber-tired wheels permit higher speeds and shorter braking

distances. Headways in general have been reduced and can be controlled flexibly by the operator via the system's operation control center, ensuring a demand-based capacity utilisation. **INA Schaeffler KG supplies the slewing rings with integrated yaw dampers for the VAL 208.**

Le VAL 208



Inseparable car unit of VAL 208 metro trains

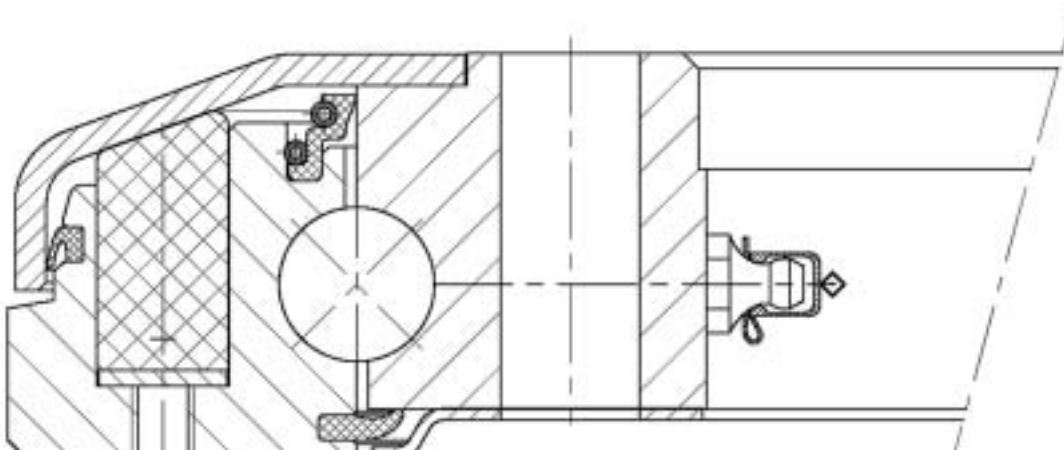
Drawing: Courtesy of Siemens AG

Slewing rings

A preloaded raceway system reduces vibration-caused damage as much as possible. Unlike conventional solutions, the system dampens the swaying motions by means of elements that are integrated into the bearing. The highly effective triple sealing protects the raceway system and damping elements from contamination and increased wear. This means that it is not necessary to reduce the maintenance cycle of the bogie/car.

Technical data

Base configuration	Married pair
Train configuration	1 to 6 cars
Power supply	750 VDC
Propulsion	4 motors/car, 65 kW each
Useful interior area	45 m ²
NBR seats (min)	11
NBR doors/side	6



Examinations of bearings with a mileage of more than 75,000 km that had been in operation daily show that they are still as good as new. This confirms the functionality and reliability of this INA-developed product.

Advantages / Benefits

- Integrated yaw damper
- Adjustable resistance
- Readjustable resistance
- Special lubricant
- Corrosion protection provided by INA Corrotect®
- Reduced life cycle costs
- High static/dynamic load carrying capacity
- Long maintenance intervals
- Very long service life

Bogies

Each two-car unit of the metro trains is equipped with four motorised bogies. Each bogie consists of two load-bearing rubber-tired wheels and a passive guidance system using four rubber wheels as well as two guide disks that are needed when the train passes over points. The bogies are connected to the car bodies via four-point contact slewing rings that transmit all loads reliably and reach a long service life.

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