

FAG Journal Roller Bearings in Light Rail Vehicles



Examples from Application Engineering

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Light rail vehicle of DB series 640/648: Developed and built by ALSTOM LHB GmbH; Salzgitter

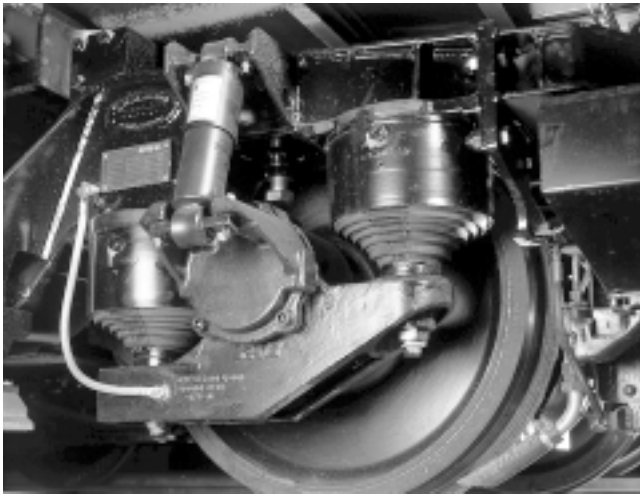
Courtesy ALSTOM LHB GmbH

These modern, light rail vehicle belong to the "CORADIA-LINT" family developed by LHB (LINT being the name of a family of light, innovative rail vehicle). The rail vehicle – which will in the

future be introduced in the Netherlands as well – are used in Germany, e.g., by the German railway company, Deutsche Bahn AG, as series 640 and 648, and by Landesnahverkehrsgesellschaft Niedersachsen under the name CORADIA-LINT 41.

The 1-car units feature two double-axle bogies and can be coupled together to form a larger unit.

FAG supply the complete journal roller bearing units for the railcars of DB series 640/648.



The bearings are separable. They can be easily mounted and dismantled and permit a quick inspection of the functional areas.

Housings

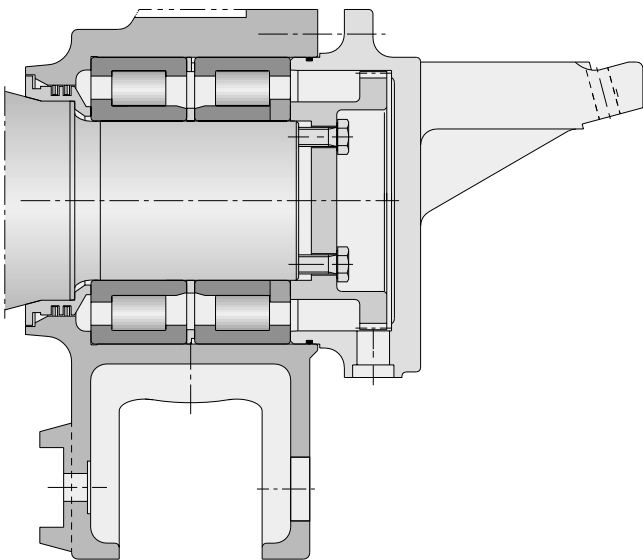
The journal roller bearing housings are made of spherical graphite iron and feature lateral, offset spring seats; some of the housings also feature a connection for the electromagnetic track brake holder.

Designed for long maintenance intervals, the FAG journal roller bearing unit consists of a complete housing with cover, roller bearing and grease.

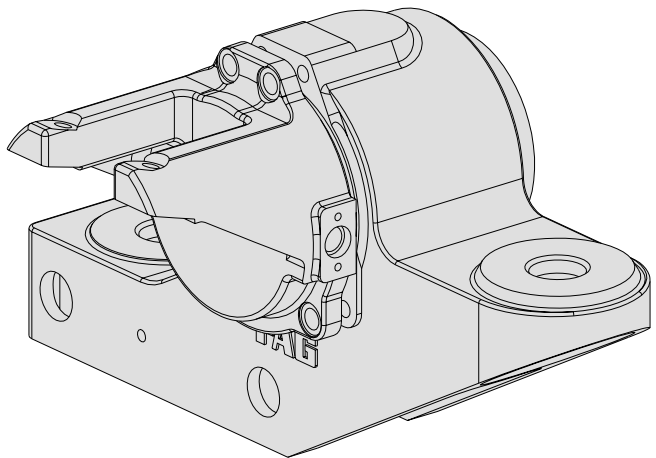
Data of rail vehicle

Maximum speed $v_{\max} = 120 \text{ km/h}$
 Wheelset load at the power bogie $A_{\max} = 145 \text{ kN}$

Journal roller bearings



Cylindrical roller bearings (types WJ and WJP) with polyamide cages accommodate the loads to be transmitted. Two cylindrical roller bearings FAG WJ100x180TVP and FAG WJP100x180P.TVP are installed per wheelset.



Lubrication and sealing

A lithium soap base grease with EP additives (approved by DB) ensures the best possible lubricating conditions. On the wheel-side, the bearings are protected from contamination by a labyrinth with lamellar rings and a pre-seal.

FAG OEM und Handel AG

Railway & Transport
 P.O. Box 1260 · D-97419 Schweinfurt
 Telephone: +49 9721 91 2366
 Fax: +49 9721 91 3788
 e-mail: rail_transport@fag.de
 Internet: www.fag.de