WE SPEAK
LOW FLOOR

TRAMS AND LRV’s

GHH-BONATRANS
Pioneers of wheelset solutions
WE SPEAK LOW FLOOR

Complex solutions for Light Rail Vehicles

GHH-BONATRANS is the world leading supplier of wheelset solutions for low-floor applications. From driven wheelset to the independent wheel unit, we design, engineer and manufacture every element of the wheelset system. From development and engineering to production, assembly and maintenance/overhaul, the complete wheelset system is the core of our expertise. We have established long-term partnerships with the major manufacturers of Light Rail Vehicles in order to gain excellent knowledge and provide the best possible expertise and consultancy already in the early stages of product development.

Solutions for all floor levels

Drive and brake between the wheels, but with limited height
Our solution: driven and non-driven wheelsets
Result: Floor level of 550 mm

No drive nor brake between the wheels
Our solution: driven and non-driven wheelsets
Result: Floor level of 450 mm

No drive nor brake between the wheels, independent wheels
Our solution: independent wheels on the axles
Result: Floor level of 350 mm

Running gears with portal frame
Our solution: swivel-mounted independent wheel units, fixed on portal frame
Result: Floor level of 205 mm

Selected customers

ALSTOM
BOMBARDIER
CRRC
HYUNDAI Rotem
pesa
SIEMENS
ŠKODA
STADLER
Innovated wheel and axle portfolio

**GHH®ULTRA-S**

GHH Radsatz GmbH has developed a new Super-Resilient Wheel for 12.5-ton axle loads. The wheel meets all requirements for a Resilient Wheel with tread diameter down to 600mm new / 520mm worn. The design of all components has been enhanced and the rubber elements have been completely reshaped. Excellent strength of the GHH® ULTRA-S was verified by applying the German quality standards (FEM analysis and assessment of stresses by application of FKM-guideline).

Next generation of independent wheel axle

The new 12.5t independent wheel axle is based on the proven and reliable GHH® V60 wheel type. Its modern upgrade for high axle loads is based on a one-piece, die-forged portal axle design and a pair of tapered roller bearings, adjusted optimally during assembly.

Resilient wheel product range

<table>
<thead>
<tr>
<th>Resilient wheels</th>
<th>Super-resilient wheels</th>
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<td>BTG</td>
<td>GHH®V15</td>
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**Splitted design:** One or two rubber rings or a number of rubber elements between wheel tyre and wheel body are mainly loaded by compression respectively shear and compression.

**Splitted design:** A number of rubber pads or two rubber elements are pre-stressed between wheel tyre and wheel body by means of pressure disc respectively wedge ring. The rubber pads / elements are loaded by shear – low radial stiffness of resilient wheel!

EN 45545 Compliance

GHH-BONATRANS is the first resilient wheel producer to comply with EN 45545 protection standard on all components of a resilient wheel.
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