



## GHH®V60 | product specification

The **GHH®V60** wheel was developed in 1990, and after a series of intensive field tests, its production began in 1993. Many car builders decided the **GHH®V60** to be the most suitable resilient wheel design for their applications.

More than 60,000 wheels have been delivered or are under order for use mainly on light rail and metro vehicles. It is an excellent wheel type for applications on low-floor light rail vehicles with high loads and/or small wheel diameters.

### Key features

- Medium and progressive radial stiffness
- Limited axial deflection
- Easy to maintain
- High noise damping effect
- High vibration damping effect
- Optimized installation space
- Compliant with EN 45545 HL2 (fire protection standard)



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Pioneers of wheelset solutions

## Simple construction

The **GHH®V60** is simple with only three main steel parts and one rubber ring. The hub and wedge ring are bolted together ensuring that the rubber ring always has the necessary pre-compression.

## Running comfort

The radial load is equally distributed between shear and compression in the rubber ring, thus the resulting load capacity is high. The

**GHH®V60** shows an efficient reduction of shocks and vibrations and a high noise damping effect.

## Safety

The torque transmission capacity (and safety against slipping effects between tyre and wheel centre) is very high, even under extreme driving and braking conditions.

## Maintenance

Quick and economical replacement of the tyre is possible. The reduction of shocks and vibrations minimizes the wear of the wheel, rail and all bogie mounted equipment. The **GHH®V60** generates low life-cycle costs and substantial reductions in downtime when the vehicle is being overhauled.

## Installation space

The **GHH®V60** allows a design with a small space envelope in axial direction, which is necessary especially for tram applications with small tyre widths. The **GHH®V60** also brings advantages on applications where a bearing (running gears with independent wheels) or other elements (for example a wheel motor drive) are directly incorporated in the wheel hub.

## Typical application

Low-floor tram type Flexity Berlin

Vehicle manufacturer: Bombardier, Operator: BVG Berlin

Wheel diameter: 660 / 580 mm

Max. axle load: 10,000 kg

Radial wheel stiffness: ca. 140 kN/mm

Axial wheel stiffness: ca. 120 kN/mm

## Technical specifications

Wheel dia (new): 400 – 870 mm

Max. wheel load: 30 – 75 kN

Radial wheel stiffness: 80 – 250 kN/mm

## Design features

- Medium radial stiffness
- High axial stiffness
- Effective reduction of curve squealing
- Optimized envelope space, due to screw connections through holes in the rubber rings
- Easy wheel tyre exchange (particularly on vehicles with inboard bearings)

