

Hydropneumatic suspension and damping system for electric city buses

CORE COMPETENCES: LINKAGES / SPRINGS / DAMPERS

Together with a partner HEMSCHIEDT has developed a hydropneumatic suspension for a double wishbone axle with a steering system. The individual solution was designed for an electric city bus, with electric motors near to the wheels. The hydropneumatic components provide optimum spring and damping characteristics, eliminating the need for conventional air springs and stabilizers. The space requirement on the axle is thus minimized. The gained space can be used to create space for more passengers. Once the driving level has been reached, the load-dependent damping works without electronic control. The hydropneumatic elements increase the

comfort for drivers and passengers immensely. The control of the chassis is stepless, the suspension is soft in the comfort-relevant area and increases progressively with increasing amplitudes. The body and the structure are protected by the low-wear components.

The air compressing unit with corresponding accumulator can be completely dispensed, because of the use of a hydropneumatic suspension in combination with a hydraulic steering and braking system. The thus saved energy leads to a range extension for electric buses, which often have to use the capacities sparingly.

Highlights

-  Optimized use of the passenger compartment due to minimized space on the axle
-  Load-dependent damping
-  Stepless adjustment of the chassis
-  Possibility of omitting all air units



Technical Data

-  10.5 t double wishbone axle driven and steered
-  Steering angle up to max. 25 °
-  Steering with centering function in case of failure
-  Axle weight approx. 1.2 t
-  Track 2200 mm
-  Wheel travel 250 mm
-  Rim 22.5 x 11.75 Inches

About HEMSCHIEDT Fahrwerktechnik

HEMSCHIEDT Fahrwerktechnik is a highly specialized supplier of chassis components and systems. Since 1929 the company develops and produces shock absorbers, as well as for more than 20 years hydropneumatic suspension systems, joint systems for buses and wheel guide elements.

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