

Hybrid Power Chassis for light commercial vehicles in municipal use

Intelligent combination of internal combustion engine and electric motor for overland tours and urban journeys – High platform flexibility

April 2019
Page 1 of 3

Munich/Kötz – Environmental zones, diesel driving bans and access restrictions already apply in many cities – and emission protection requirements are becoming ever more stringent. AL-KO Vehicle Technology and Huber Automotive AG, an established specialist for embedded automotive electronics, have the answer and will present the new Hybrid Power Chassis at bauma 2019. This plug-in technology system, with permitted gross weights of between 3.5 and 5.0 tonnes, offers the ideal solution for emission-free urban journeys with the electric drive and longer, out-of-town tours with the internal combustion engine. The special feature: The electrified rear axle with an output of approximately 90 kW can be switched on as required, making the transporter the first light commercial vehicle with a hybrid concept – ideal for use in the municipal sector. For example, platform trucks, box vans with blinds, waste dump trucks, leaf collectors, box vehicles with tool cabinets, elevating platforms, vehicles with irrigation systems and high-pressure cleaners are possible as superstructures.

Thomas Lützel
Corporate Communication
Phone: +49 8221 97-8239
Mobile: +49 170 9252099
thomas.luetzel@alko-tech.com

ALOIS KOBER GmbH
Ichenhauser Strasse 14
89359 Kötz, Germany

www.alko-tech.com

Presented as a concept study at the Munich trade fair, the Hybrid Power Chassis enables emission-free, all-electric driving alongside unrestricted use of the internal combustion engine. The basis is the variable AL-KO lightweight chassis, which – as a system carrier – enables modular use of the battery packs and e-components while providing a protective function for the batteries at the same time. Depending on customer requirements, the battery capacity can be adjusted to a range of up to around 100 kilometres in all-electric operation. For longer distances, such as overland journeys, the vehicle's internal combustion engine can be used without restriction. If the e-drive and internal combustion engine (booster) are used at the same time, savings fuel of up to 30 percent were calculated in the study.

The powerful on-board charger with a charging capacity of approx. 7 kW – or optionally 22 kW (230 V/400 V) – plus the intelligent recuperation strategy ensure short charging times and sufficient power. Intermediate charging when loading or

unloading the vehicle and during rest periods is possible at any time. Recuperation enables the system to supply vehicle superstructures with energy and to act as a buffer when the vehicle is stationary. This function can be individually parametrised to different customer requirements. It is also possible to operate applications such as hydraulic ramps, interior lights or air conditioning systems as well.

The Hybrid Power Chassis offers the following three driving modes:

- Hybrid mode: The hybrid mode combines the e-drive with the vehicle's internal combustion engine, thus ensuring greater efficiency. In addition, vehicle superstructures can be supplied with energy. Important: This driving mode supports compliance with the new WLTP standard.
- Electric mode: The all-electric drive (a maximum driving speed of approx. 90 km/h) is provided by the high-torque electric axle. This enables silent and emission-free journeys through environmental zones, residential areas, inner cities, factory buildings, local recreation areas or airports.
- X-TRA charge mode: This automated mode is used to extend the electric range of the battery and to provide additional electrical energy.

Extra functions such as a 4x4 starting aid – for added traction on slippery surfaces or gradients – as well as various connectivity solutions, such as automatic switching to e-drive when entering environmental zones or GPS and vehicle data transmission, are also possible.

The plug-in hybrid can be adapted to various base vehicles and thus represents an open, power head-neutral platform for the future. Cities and municipalities in particular benefit from the high flexibility and adaptability of AL-KO Vehicle Technology in the configuration of municipal vehicles. In addition, special funding programs will support the further introduction of electric and hybrid powertrains in the municipal segment.

Further details will be available from 8th to 14th April, 2019 at the AL-KO Vehicle Technology stand at bauma 2019 in Munich (Hall B4, Stand 436).

Image captions

AL-KO Hybrid Power Chassis_hybrid mode: The "Hybrid Mode" combines the e-drive with the vehicle's internal combustion engine, thus ensuring increased efficiency. In addition, vehicle superstructures can be supplied with energy.

AL-KO Hybrid Power Chassis_chassis: The AL-KO Hybrid Power Chassis is based on the variable AL-KO lightweight chassis which, as a system carrier, enables modular use of the battery packs and components.

AL-KO Hybrid Power Chassis_drive: The electric drive of the AL-KO Hybrid Power Chassis. Vehicles can be driven purely electrically up to 100 kilometres with the corresponding energy storage devices and the intelligent control unit.

Photos: AL-KO Vehicle Technology

ALOIS KOBER GMBH

Founded in 1931, AL-KO Vehicle Technology is now a global technology company with around 30 sites in Europe, South America, Asia and Australia. A supplier of high-quality chassis components for trailers, leisure vehicles and light commercial vehicles, AL-KO is synonymous with ergonomic and functional excellence, superb comfort as well as innovations for greater driving safety. The company specialises in sophisticated innovation processes and has received many awards for this.

AL-KO Vehicle Technology and Dexter Axle merged to form DexKo Global Inc. at the end of 2015. This combination is the world's largest manufacturer of trailer axles and chassis components in the lightweight segment. DexKo Global Inc. has a turnover of more than US\$ 1.5 billion.