



Aurobay REx

An enabler for last mile connectivity and full fleet electrification.

Introducing Aurobay REx

Producing accurate forecasts on customer powertrain demands at the horizon of a product development cycle is a complex matter in a transitioning sector. Consequently, many OEMs decide to develop and maintain multiple powertrain solutions, which can become financially exhausting. Moreover, a competitive powertrain solution must have the potential to, with renewable energy sources, reach net-zero GHG impact over the complete vehicle lifecycle without compromising customer utilization. To fulfil this demand and enable full fleet electrification Aurobay has designed a modular range extender, the Aurobay REx.

Targeting a wide range of applications including medium-/ heavy-duty commercial and mobile machinery, a critical design target has been to enable flexibility in utilization degree. In the Aurobay REx solution we combine our high power-density energy-efficient light-duty combustion engines with a high voltage generator to a compact unit with size corresponding to about 230 kWh battery module. We have adapted our emission solutions for a variety of charging strategies and verified our engines for renewable drop-in fuels at 65% GHG reduction compared to fossil. Finally, we have acknowledged the requirements following installation in a battery electric platform and kept the vehicle interfaces to a minimum.

“An ultimate benefit for commercial vehicles”

Base configuration and operation principles

The base configuration of Aurobay REx unit consists of an inhouse developed and manufactured internal combustion engine (ICE) with an electric generator connected at the crankshaft. The ICE architecture includes a 1.5 L, 3-cylinder gasoline, a 2 L, 4-cylinder diesel, and a 2 L, 4-cylinder Miller gasoline. Our engines have high degree of commonality since all variants are installed in the same passenger car applications and produced in the same production line at Aurobay. The Aurobay ICE can therefore be interchangeable with low effort in the Aurobay REx portfolio.

Tailored to your individual needs

Several factors influence the optimal choice of REx nominal power. By supplying a range of 60-150 kW continuous charging power the Aurobay REx fulfills the demands of a large number of commercial vehicle applications.

An ultimate benefit for commercial vehicles

Heavy-duty trucks travel long distances, and they need reliable and efficient energy solutions to keep them moving. For example, our 100-kW range extender provides extended range for 40-ton trucks and satisfies daily operation ranges for 60-ton trucks with low-rate charge depletion during highway driving. With Aurobay REx, operators can reduce battery capacity and save on weight and cost while maintaining flexibility with route planning.

Sustainability and emissions

While recent technology has made improvements in reducing harmful emissions, the best way to minimize them is by avoiding short trips and frequent starts. Aurobay REx provides a solution by operating steadily over time, which greatly reduces the amount of harmful emissions released during start-up. With a concept design of three different power levels and special exhaust aftertreatment system, our range extender minimizes emissions while still providing optimal performance.

Get in touch

We've already built the concept design for commercial vehicles, and we're sharing our progress at the International Vienna Motor Symposium. Join us for an exclusive opportunity to hear all about Aurobay REx on 27th of April at 15:30 in Galerie.

For inquiries, contact the Sales team at sales@aurobay.com