

Horse Powertrain reveals revolutionary Future Hybrid Concept powertrain

- **Horse Powertrain reveals Future Hybrid Concept powertrain at Auto Shanghai 2025**
- **Future Hybrid Concept unit is a compact powertrain designed to hybridise Battery Electric Vehicle platforms with minimal modifications to the vehicle platform**
- **Compact, modular powertrain for passenger vehicles assembled as a single unit, including engine, electric motor, and transmission**
- **Supports a range of fuel categories, including gasoline, biofuels, and synthetic fuels**

London, UK (17 April 2025) – Horse Powertrain, a new global leader in innovative and low-emission powertrain systems, has revealed its Future Hybrid Concept at Auto Shanghai 2025.

The Future Hybrid Concept is a revolutionary hybrid powertrain, designed to accelerate the industry's transition to net zero. It integrates an internal combustion engine (ICE), electric motor, and transmission into a single, compact unit.

This new powertrain allows automakers to hybridise BEV platforms to meet changing customer demand, as well as eliminating the need for multiple platforms and production lines.

The lightweight, modular powertrain fits within existing Battery Electric Vehicle (BEV) platforms, and serves as a range extender to the existing battery, with its transmission and driveshafts enabling AWD operation both in EV and parallel modes.

Future Hybrid Concept can be powered by a range of fuel types. This includes gasoline, ethanol flex fuels, pure methanol, and modern synthetic fuels.

Matias Giannini, CEO at Horse Powertrain, says: *“Horse Powertrain is focused on solving the biggest problems facing automotive OEMs. For over a decade it looked like Battery Electric Vehicles were the only path to net zero, and OEMs planned accordingly. However, we’re now shifting towards a technology-neutral world, with different markets and applications each pursuing their own sustainable mobility journey.*

“Our Future Hybrid Concept helps OEMs solve this problem. Through our innovation, we can deliver a full hybrid powertrain system that seamlessly integrates onto a Battery Electric Vehicle platform. This compact, integrated powertrain concept allows OEMs to offer powertrain diversity with minimal disruption to production process and resource expenditure.”

Horse Powertrain will debut Future Hybrid Concept during its press conference at 1000 (China Standard Time) on Thursday 24 April 2025, booth 8A17 in Hall 8.1H at Auto Shanghai 2025. It plans for the first vehicles using the Future Hybrid Concept to reach the roads as early as 2028.

Future Hybrid Concept is a step change in powertrain production. It consolidates the complex hybrid powertrain component stack into one compact unit, achieving significant system integration efficiencies.

By eliminating most of the tooling and unique assembly steps required for hybrid system assembly and installation, the architecture also saves significant resources for OEMs planning for mixed propulsion production on the same line.

Ragnar Burenus, Chief Engineer of xHEV systems at Horse Powertrain, says: *“The Future Hybrid Concept is designing as a single-piece combustion engine, motor, and transmission unit, reducing the complexity of a hybrid powertrain. This allows more flexibility for its packaging, allowing for it to be integrated in existing BEV platforms with minimal modifications to the vehicle.”*

The compact size and geometry of the powertrain concept has been designed to replace the front electric drive unit of a BEV. Requiring only minor modifications, the powertrain bolts directly to the vehicle’s subframe, allowing OEMs to offer hybrid models on BEV platforms without having to commit to significant redesigns. It can also fit a traditional combustion vehicle platform.

Fitted in an East/West orientation, Future Hybrid Concept has a ‘slimline’ top with a wider profile at the bottom, designed to ensure compliance with global safety and crash standards. It also features the power electronics systems required for an efficient hybrid powertrain, containing a controller, inverter, DC/DC converter, and on-board charger. It also includes an 800V charging booster for fast charging.

Future Hybrid Concept has been designed to be used and operated anywhere in the world. It features a pre-chamber ignition system that supports a range of fuels, including gasoline, E85 ethanol flex fuels (an established fuel in South America), M100 methanol fuel (a rapidly growing alternative fuel in China, India, and sub-Saharan Africa), and synthetic fuels.

The powertrain concept also anticipates numerous environmental and product design standards, with its compact packaging accommodating next-generation automotive heat pumps and the use of R290 refrigerants.

Horse Powertrain’s comprehensive product range across the hybrid and combustion component stack, along with its expertise in full-powertrain integration, satisfies 80% of market requirements. This is achieved through a global footprint of 17 manufacturing plants, five R&D centers, and 19,000 employees.

