Horse Powertrain reveals fully integrated hybrid powertrain

- Horse Powertrain, via its Horse Technologies division, reveals an all-new integrated powertrain
- Unit combines its new 1.8L 'HR18' engine, its DB45S transmission, a 1.4kWh battery, and 50kW 5DH motor, with all systems developed end-to-end by Horse Technologies R&D teams
- Start of production announced for HR18 engine at Horse Technologies' plants in Valladolid (Spain) and Bursa (Türkiye)

London, UK (24 June 2025) – Horse Technologies, a division of Horse Powertrain and a leader in innovative and low-emission powertrain systems, has announced its new integrated hybrid drive unit, the HR18 HEV.

The first complete powertrain unit designed, developed, and produced under the Horse Powertrain brand, the HR18 HEV was developed at the R&D centers in Romania and Spain. The unit will be produced at Horse Technologies' Bursa plant in Türkiye, and its Valladolid plant in Spain.

The advanced hybrid powertrain consolidates key technologies from across Horse Technologies' product portfolio into a single, efficient unit that can power a range of mobility solutions. It combines a combustion engine, electric motor, transmission, and power electronics into a single solution.

To coincide with the announcement of the new powertrain, Horse Powertrain is beginning production of its 'HR18' combustion engine: a new 1.8L, 4-cylinder gasoline direct injection engine. Weighing just 100kg, the HR18 delivers up to 80kW (108PS) of power and 172Nm of torque.

The HR18 is an Atkinson-cycle engine built specifically for use in hybrid powertrains, and is compatible with flex fuel blends of up to 10% ethanol content. It fully complies with both Euro 6E-BIS and Euro 7 emissions standards. The HR18 engine was developed at the Horse Technologies' Bucharest R&D center in Romania, and will be cast, machined, and assembled the company's plants in Valladolid and Bursa.

The HR18 HEV powertrain integrates a BTA Gen2 lithium-ion battery, developed at its Valladolid R&D center. Weighing just 36kg, it can store up to 1.4kWh of energy and discharge at a peak rate of 11.6Ah, with a voltage range of 150-279V. Despite its compact shape (707x422x190mm), the BTA Gen2 includes two modules of 34 cells with an integrated cooling system.

The unit's transmission is the clutchless DB45S gearbox manufactured in Seville, Spain, which can deliver a maximum torque of 436Nm. The powertrain also uses the Horse Technologies 5DH motor, produced at its plant in Aveiro, Portugal, with a peak power output of 50kW and peak torque of 212Nm.

Matias Giannini, Chief Executive Officer of Horse Powertrain, said: *"The HR18 HEV is designed directly to address challenges facing OEMs in today's market. HEVs are becoming the most in-demand powertrain category in many markets, requiring many brands and OEMs to make significant investments in bolstering their HEV offering – all while they face unprecedented commerical pressures. By solving the major challenges involved in producing*

and integrating such a high-performance system, we're freeing up our OEM partners to focus on their priority innovations and areas of differentiation."

Patrice Haettel, Chief Executive Officer of Horse Technologies, said: *"The HR18 HEV is the culmination of work by teams across Horse Technologies' European network of plants and R&D centers, who have developed the key technologies for this project. It further strengthens our transition into a fully integrated powertrain partner for the automotive industry and reflects our team's unwavering commitment to delivering a complete range of propulsion solutions".*

The HR18 HEV was designed from the outset as a versatile global solution. By offering an integrated, efficient foundation for hybrid mobility, the HR18 HEV is both a scalable and easy-to-implement solution for OEMs, while also enabling automotive's decarbonisation journey.

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About Horse Powertrain
Horse Powertrain is a new global leader in hybrid and combustion powertrain solutions, supporting automotive OEMs with a range of systems including engines, transmissions, power electronics, and integrated hybrid platforms. Consisting of two divisions, Aurobay Technologies and Horse Technologies, Horse Powertrain operates 17 plants and 5 R&D centers globally, serving a range OEMs including Renault Group, Geely Auto, Volvo Cars, Proton, Nissan, and Mitsubishi Motors Corporation. Horse Powertrain is headquartered in London, UK, and employs 19,000 people globally. The company's three shareholders are Renault Group (45%), Geely (45%), and Aramco (10%).

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