Strategic Partnership: Continental and DeepDrive Develop Wheel Hub Drive with Integrated Brake



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New component could revolutionize vehicle electrification

- Matthias Matic, head of Continental's Safety and Motion business area:

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- Felix Poernbacher, co-founder and managing director of DeepDrive:

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Frankfurt/Munich, Germany, October 5, 2023. Continental has entered a strategic partnership with Munich-based high-tech company DeepDrive to develop core technologies for electric vehicles. As a first milestone, both companies will jointly develop a combined unit comprising drive and brake components for mounting directly on the vehicle wheel. DeepDrive is a specialist in the development of efficient electric motors, with many years of experience in large-scale automobile production. Continental, in turn, contributes its technological know-how in brake systems and its expertise in the industrialization of innovative technologies.

> With DeepDrive, we have gained a strong partner with whom we can jointly and sustainably advance the market penetration of electric mobility," says Matthias Matic, head of Continental's Safety and Motion business area. "The electric motors developed by DeepDrive extend the range of electric vehicles.

> They are lighter, more economical, and more resource efficient. Combining all that with our efficient, high-performance brake technology to produce a new, compact unit is a decisive contribution to the success of electric mobility. What belongs together grows together here.
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> We are convinced that the development of our dual-rotor motor will revolutionize the electrification of motor vehicles," says Felix Poernbacher, co-founder and managing director of DeepDrive. "The strategic partnership with Continental makes it possible to combine our drive system with the brake technology needed to create an innovative electric component essential to the mobility of tomorrow. The soaring demand for such technology demonstrates that this is the right way to go.

Both companies see great potential in their collaboration as the electrification of vehicles makes it possible in the future to place all chassis functions, including the drive, directly on the wheel. In order to best implement the different requirements of electric vehicles, such as maximize the range while minimizing installation space and simultaneous modularity, comprehensive optimization at vehicle level is necessary. The optimal coordination of brake and drive system makes a decisive contribution here. The integration of both elements in one unit enables a particularly high level of efficiency in the drive and when braking. Moreover, integrated components reduce complexity through modularization and facilitate the manufacturing process.

Innovative drive-brake unit is more efficient, more compact, and more economical

DeepDrive has developed and patented what is called a dual-rotor, radial-flux motor that can be installed as a central drive unit or as a wheel hub drive in series production vehicles. The partnership is focusing on developing an efficient, compact wheel hub drive optimized with a view to cost-effective production. And Continental is contributing not only brake components for the joint drive-brake unit: With its expertise in industrializing products right through to series development, the company is ensuring that the motor innovation from Munich will be road-ready with state-of-the-art brake technology soon. In the first step, a hydraulic brake is integrated into the drive-brake unit. In a second step, it is also planned to integrate on the long-term

dry braking systems without hydraulic components into DeepDrive's innovative wheel hub drive. The combination of drive and brake in one unit is also the first step towards a so-called corner module with integrated chassis components, such as air suspension systems from Continental, in a compact unit directly on the wheel.

The collaboration between the companies was initiated by Continental's Corporate Venture unit (co-pace). The Corporate Venture unit also participated in the Munich-based company as a financial investor in a Series-A financing of DeepDrive that was completed at the beginning of the year.

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