Hyundai and Kia develop wheel hub drive

Hyundai and its subsidiary Kia have developed a new wheel hub drive. The main aim of the "Uni Wheel" is to gain more space in the interior of electric cars, also with regard to seating concepts for autonomous driving. It also creates new possibilities for the construction of special vehicles. By moving the reduction gear into the wheel hub and placing a compact motor near each wheel, the length of the drive shafts is reduced and a flat vehicle floor is made possible.

The Uni Wheel uses a special planetary gear configuration consisting of a sun wheel in the middle, four pinions on each side and a rotating ring gear. The energy generated by the motor is transferred to the sun wheel, which then turns the ring gear via the pinions. This is connected to the wheel and drives the vehicle. The pinions are connected to each other and allow multi-axis movement and various types of wheel suspension. Due to the high torque, a more compact electric motor can also be used.

In addition to vehicles of various sizes, Uni Wheel can also be used for other types of mobility aids such as wheelchairs, bicycles and delivery robots. The system is scalable and can be used with wheel sizes from four to 25 inches or more. The ability to move the wheel's axis of rotation also enables mobility aids that make climbing stairs possible.

Hyundai Motor and Kia have applied for and registered eight patents in South Korea, the USA and Europe for their new Antriesb concept. (aum)

Images for article

Photo: Autoren-Union Mobilität/Hyundai

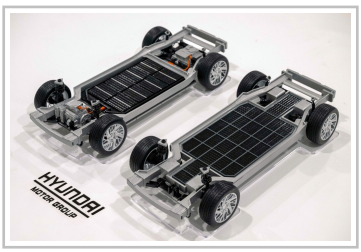
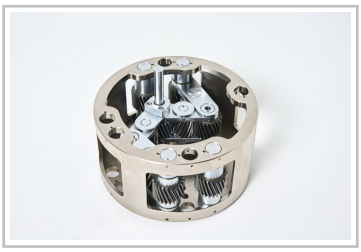


Photo: Autoren-Union Mobilität/Hyundai



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