Press release

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From the wind tunnel to the sidewalk: Bosch is bringing smart electrical drives to strollers

e-stroller system revolutionizes comfort and safety

- Bosch management board member Dr. Stefan Hartung: “The Bosch e-stroller system incorporates know-how from across the company.”
- Intelligent sensors regulate electrical drive and automatic braking function.
- Nine out of ten parents look at a stroller’s comfort and safety.
- Smartphone app gives the Bosch e-stroller system connectivity via Bluetooth.

Bühl, Germany – Measuring a seven on the Beaufort scale, the air in the wind tunnel blasts the stroller at a speed of 60 kph. Its hood may be flapping wildly, but the stroller doesn’t budge. This isn’t because its parking brake is on, or because someone is holding it still. It’s all thanks to the new Bosch e-stroller system. This is much more than an electrical drive – it is an assistance system for strollers with a comprehensive range of comfort and safety features: in addition to offering push support and an automatic braking function, this includes connectivity via a smartphone app, an alarm function, and a variety of high-tech sensors. This new system marks Bosch’s entry into a new market. “The e-stroller system incorporates know-how from across the company. We’ve applied the same rigorous technology and quality standards here as we do in the automotive sector, including wind tunnel tests,” says Dr. Stefan Hartung, member of the board of management and chairman of the Mobility Solutions business sector. The variable Bosch system is equally suitable for single, twin, or sibling strollers. It will have its market launch in early 2020 with the Swedish stroller manufacturer Emmaljunga. Collaboration with additional manufacturers is planned.

Two electric motors help with acceleration and braking

Demand for electric assistance for strollers is growing. Comfort and safety are the key criteria for nine out of ten parents when buying a stroller. This is the result of a representative Bosch survey of women and men with a child aged 0 to 4 years old as well as expectant parents. “Bosch wants its mobility solutions to

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offer help even before a child can walk, bringing intelligent mobility to all areas of life," Hartung says. The system's drive unit comprises two low-noise electric motors on the rear axle along with a Bluetooth module and a smart sensor system. The sensors, which are also employed in smartphones, measure things like the stroller's speed and acceleration while assessing the road surface it is moving over. Using algorithms, they can calculate in fractions of a second what mom or dad wants to do next. On an uphill path, the motors automatically help push the stroller, as they do on an e-bike. When on a downhill slope, they step in to help brake. If the parents let go of the stroller, the motor brake prevents it from rolling away unchecked, and the electromechanical lock engages the parking brake. In line with Bosch's typical approach of combining the highest technical standards with user-friendly operation, the e-stroller system has no need for additional switches or buttons on the push handle.

The electric assistance not only increases comfort and safety, but also improves the stroller's ergonomics. Bosch user testing showed that the e-stroller system can greatly improve parents' posture, since it takes a lot less effort to push the stroller uphill, over uneven terrain, or into a headwind. Meanwhile, the self-braking electrical drive noticeably eases back strain when heading downhill. The system's steering support also brings clear benefits when pushing with just one hand. Among other things, this makes bends easier to manage. What's more, the drive system helps keep the stroller on course when on a laterally sloping path. After all, parents often push a stroller with one hand, for instance when holding their child's older sibling with the other hand.

Smartphone connectivity via Bluetooth

Users can choose from three levels of electric assistance using the associated smartphone app (available for Android and iOS). The app communicates with the e-stroller system via Bluetooth. It also displays the charge level of the detachable battery and warns users in good time that power is running out. The stroller's handy, lightweight 18-volt lithium-ion battery is housed in a lockable compartment. This is the same battery used in standard Bosch power tools such as cordless screwdrivers, which means that the stroller battery can be used to power other devices and vice-versa, whenever a spare battery is needed. With a charging time of some two and a half hours, the fully charged battery offers a range of up to 15 kilometers, depending on the level of assistance selected and the weight of the stroller. Parents can also charge their smartphone using the system's USB port. The app can be used to activate the alarm function, too, for instance when parents leave the stroller parked outside a café. Provided a Bluetooth connection has been established with a parent's smartphone, a warning will appear if anyone tries to push the stroller away. In addition, an alarm will sound from the stroller's integrated loudspeaker and the parking brake will

automatically reengage. Should the battery run out on the move after all, the stroller can still be used like a normal stroller – with no perceptible motor resistance.

Press photographs: #2718966, #2718967, #2718968

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