Brushless DC motors drive a wheelchair that will climb stairs.

Climbing stairs at a speed of one step per second. Powered by two maxon brushless DC motors this electric wheelchair is safe, maneuverable, fast and easy to operate.

This remarkable wheelchair is widening the landscape for those who rely on wheelchairs for everyday use. University engineers wanted to remove the hurdle that stairs present for a wheelchair user.

Upon approaching a set of stairs, the person will select a function on a touch screen. With sensors and cameras that measure the incline of the stairs, the wheelchair automatically turns around and reverses up the stairs. The person stays upright at all times and is stabilised by the design of the caterpillar wheels.

The wheels and the caterpillars are equipped with two maxon brushless DC motors fitted with ceramic gearheads. The modified gearheads give a longer service life. Selected for their durability, precision movements, quiet operation and lightweight at 3.2kgs the brushless DC drives unite two motion principles in one. Upon reaching the top of the stairs, the chair stabilises and retracts the caterpillar wheels under the chair thus continuing the journey on two wheels. Controlled by a maxon EPOS2 70/10 controller, the digital positioning of the EPOS2 ensures perfect control for both brushed and brushless DC motors.

For more information please contact a Sales Engineer. Tel. +61 2 9457 7477.

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The media release is available on the internet at: www.maxonmotor.com.au

Raffael Künzi tries out the Scalevo wheelchair © 2015 maxon motor
maxon GP52 C Ø52 mm ceramic version © 2015 maxon motor

The EPOS2 70/10 digital positioning motor controller © 2015 maxon motor

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