



Press release
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Locking gas springs by Suspa make it even easier to control Levo's reliable standing wheelchairs

The gas spring manufacturer Suspa is presenting its competence in the customised construction of gas springs for medical applications at Medica 2016.

Altdorf, Germany, 15 November 2016 – Standing wheelchairs hugely improve their users' quality of life and independence. They are a great help during day-to-day life, at work and at school. In an upright position, wheelchair users can reach things that are higher up and carry out activities that are not possible sitting down. For more than 40 years, the Swiss manufacturer Levo has been adapting its standing wheelchairs to target the needs of people with all kinds of physical disabilities. For the kinematics of its customised wheelchairs, Levo relies on Suspa gas springs, which are adapted to fit each specific application. "Power assistance is one of the most important aspects of construction, as it means that the user is able to easily switch between a standing and a sitting position," Suspa Application Engineer Stefan Richter explains.

Levo's standing wheelchairs are the focus of Suspa's appearance at this year's Medica in Düsseldorf, where it will be presenting the Active Easy LEA by Levo at its booth (hall 14, booth E37). This model can be used to demonstrate the variability with which Suspa is able to address the application-specific requirements of a range of products, including this kind of wheelchair. The way a wheelchair is customised – for both children and adults – is dependent on the users' body weight, for example. For this reason, Suspa provides gas springs for different loads of between 250 and 750 newtons for people who weigh between 30 and 110 kilogrammes.

There is also a selection of different locking characteristics. Non-locking gas springs are used in standing wheelchair variants with integrated electrical standing functions that can be selected by pushing a button. They assist the motor by bracing the wheelchair user's weight during lifting and lowering. This makes it possible to use a compact motor that only requires little construction space. Locking gas springs with light absorption are used in wheelchairs in



which users apply pressure to the armrests in order to mechanically operate the grab rails. This means that upwards and downwards motions can be locked in gently over a number of levels.

Easy operation thanks to power assistance

“Speed, absorption and holding power are always different depending on requirements and are adjusted in the gas springs at the factory accordingly,” says Stefan Richter. In the case of wheelchairs in particular, it is about maximising power assistance to a point where the user can stand up using as little physical exertion as possible. This also means adjusting the gas springs’ progression when retracting the piston rod in such a way that the users can get back into a sitting position effortlessly using their body weight alone. Moreover, the gas springs have been conceptualised in such a way that dirt and UV rays do not impair the wheelchair’s lifespan. The hoses and Bowden cables necessary for operating wheelchairs are installed safely and in a user-friendly way.

Suspa’s gas springs are not just installed in wheelchairs in order to enable the user to stand up; they can also be used as undercarriage absorbers or for adjusting backrests or seat inclination. “We have been continuously working with Levo on face lifts and materials for years, which means that it is becoming easier and easier to operate the wheelchairs,” Stefan Richter adds.

The medical industry does not just use the gas springs, dampers and adjustment systems in wheelchairs, but also in hospital beds, side tables and treatment tables.

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Image 1: Levo's standing wheelchairs can be brought into an upright position easily thanks to Suspa's customised gas springs (coloured orange in the image)

Image: © Suspa GmbH



Image 2: Variability – with Suspa gas springs *the* strength of Levo's standing wheelchairs.



Image: © Suspa GmbH
About Suspa GmbH

Suspa GmbH is a specialised manufacturer of gas springs, dampers and adjustment systems, and is a market leader in the field of adjustable hydraulic dampers. The company's portfolio also includes lifting columns, piston rods, crash management systems and safety systems, as well as complex drives and actuators. Its focus lies on customer-specific solutions. Suspa's products are used in the automotive, mechanical engineering, furniture, white goods, medical and durable goods industries. Suspa is considered the global market leader for washing machine applications. Headquartered in Altdorf, Germany, the company also operates local production sites in Germany, the Czech Republic, the US, China and India. Every year, Suspa produces roughly 1,500 different models of approximately 98.5 million parts. The company currently employs a staff of 1,770 people around the globe.

More information and product details are available at: www.suspa.com

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Suspa is exhibitor at Medica 2016 in Düsseldorf
Hall 14, Stand E37**

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