



**WITTENSTEIN AG at the Hanover Fair 2014**

## **Secure mechatronic drive technology**

**Control complexity, minimize risks, create security!**

**At the WITTENSTEIN AG booth at the Hanover Fair 2014 (Hall 15, Stand F08) everything will 'revolve' around the subject of security. A three metre high, rotating demonstrator with a smart drive system will illustrate the multiple aspects that contribute to reliable and secure sizing of mechatronic drive systems. The mechatronics corporation will also show how functional reliability and data security are closely bound up with the core ideas of Industry 4.0. WITTENSTEIN's claim to "create security by controlling complexity" will come alive at the Hanover event with a series of innovative mechatronic products.**

Security, intelligence, resource efficiency – WITTENSTEIN traditionally integrates each of these three aspects into the development of its products and system solutions. Ever shorter market cycles, increasingly customized products and solutions and close-knit networks of services and things are associated with a growing complexity of the mechatronic drive technology. "There is a risk that systems could become uncontrollable – which WITTENSTEIN is seeking to mitigate with efficient, controllable drive technology for complex mechatronic challenges", says Professor Dieter Spath, who took over as President of WITTENSTEIN AG in October 2013.

### **Security – a multifunctional term**

Personnel protection, the need to avoid damage to machinery and plant, optimal reliability – all of these conceptual dimensions are mirrored in the term "security". It is therefore only natural that issues such as functional reliability, freedom from defects, data security and safe operation should go hand in hand with controllability. The communication enabled mechatronic drive system specially developed for the Hanover Fair, on which a rotating 115 kg arm is conveniently braked from highly dynamic situations extremely fast

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High-tech products made by WITTENSTEIN fly into space and win Formula One races. Intelligent drive systems – from the world's smallest high-performance servo drive to the latest state of the art in medical technology – are developed, produced and marketed by a team of around 1800 employees. With a blend of dedication and enthusiasm, we set benchmarks – every day – worldwide.



Redundant AC servo actuators made by WITTENSTEIN motion control are used to extract oil at a depth of up to 3000 metres.

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and without vibration using a smartphone, will allow WITTENSTEIN to demonstrate the causal link between security and controllability.

### **Reliable drive technology – vital in aircraft or on the sea bed**

This same link is also applicable to WITTENSTEIN drive systems, such as the WITTENSTEIN cyber motor-made frameless motor in a WITTENSTEIN aerospace & simulation actuator for the doors of the Airbus A380 or the redundant AC servo actuator from WITTENSTEIN motion control that is used for oil extraction. Security through reliability helps optimize resource efficiency. Security through intelligent hardware and sensorics improves pilot training in flight simulators and eliminates problems with processes and products. "Data security is a key prerequisite in the Industry 4.0 landscape, where smart components are interconnected as a platform to create value in the future through software based services", explains Dr. Bernd Schimpf, Director Mechatronics at WITTENSTEIN AG.

### **Industry 4.0 as a hands-on experience**

Data security is a pivotal factor in communication enabled electric powertrains or in connection with smart software. When cyber-physical production systems are realized in the framework of the future project known as Industry 4.0, it plays a crucial role alongside functional reliability. With this in mind, WITTENSTEIN will collaborate with three partners to let visitors to the Hanover Fair experience the data security aspect hands-on. Hewlett Packard will present "Virtual Fort Knox" (VFK) – a secure, federative cloud platform – together with Fraunhofer IPA. This freely accessible platform provides software based services that interact with physical products to generate additional benefits for customers and can be leveraged for new business models. m2m-soft GmbH will show its VFK-compatible "m2m-Cockpit", a do-it-yourself software platform that makes light work of creating applications for Industry 4.0. The information received from mechatronic drives, for instance, can be entered and evaluated in a web portal very easily as a basis for value added services.

As a driver of innovation at the forefront of Industry 4.0, WITTENSTEIN is familiar with the many different safety and security requirements of interconnected business and value creation processes. The ability to control these processes safely and reliably will constitute a major milestone on the road to "smart factories".

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WITTENSTEIN can contribute the all-important mechatronic drive expertise and future security.

### **WITTENSTEIN and CyProS also in Hall 8**

In addition to the main exhibition stand No. F08 in Hall 15, WITTENSTEIN will also be in attendance at the CyProS booth (Hall 8, Stand C10), which will cast a spotlight on some of the typical benefits of Industry 4.0 in real production environments.

To improve productivity and flexibility by interconnecting smart systems in the factory – in other words by fusing production and Internet technologies – is the goal of the CyProS research project, in which WITTENSTEIN has been involved as consortium leader since its launch in September 2012. In the first step, this project is concerned with building a representative range of cyber-physical modules for production and logistics systems. Next, universal procedures, tools and platforms will be made available prior to introducing cyber-physical production systems (CPPS). Finally, a technical and methodological basis will be established for utilizing CPPSs efficiently and implementing them in actual production environments like the ones WITTENSTEIN will show in the "shop window factory".

### **Photo:**

This redundant AC servo actuator made by WITTENSTEIN motion control enables oil to be pumped safely and efficiently without harming the environment. Maximum availability and functional reliability as well as trouble-free operation are assured for at least twenty-five years.

Texts and photographs in printable quality can be downloaded from <http://www.wittenstein.de/presse.html>.

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**Invitation to the WITTENSTEIN AG press briefing at the Hanover Fair 2014**

**When?** Tuesday, April 8, 2014, from 4 to 4.45 p.m.

**Where?** WITTENSTEIN AG, Hall 15, Stand F08

**Subject:**

WITTENSTEIN AG – Secure mechatronic drive technology

**Speakers:**

Professor Dieter Spath, President of WITTENSTEIN AG, and Dr. Bernd Schimpf, Director Mechatronics at WITTENSTEIN AG

**WITTENSTEIN AG – one with the future**

With around 1,800 employees worldwide and sales of €241 million in 2012/13, WITTENSTEIN AG enjoys an impeccable reputation for innovation, precision and excellence in the field of mechatronic drive technology – not just in Germany but internationally. The group comprises eight pacesetting Business Units with separate subsidiaries for servo gearheads, servo actuator systems, medical technology, miniature servo units, innovative gearing technology, rotary and linear actuator systems, nano technology and electronic and software components for drive technologies. Through its 60 or so subsidiaries and agents in approximately 40 countries, WITTENSTEIN ([www.wittenstein.de](http://www.wittenstein.de)) is additionally represented in all the world's major technology and sales markets.

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