



Identifying new trends – setting new benchmarks!

WITTENSTEIN alpha: Thirty years of innovation leadership in low-backlash planetary gearheads

Exactly thirty years ago – at the Hanover Fair 1983 – the launch of the world's first SP low-backlash planetary gearhead marked the dawn of a new era in distributed servo drive technology. Anticipating the technology shift to decentralized servo actuators, Dr. Manfred Wittenstein, meanwhile President of WITTENSTEIN AG, set an important benchmark with this new gearhead which is still the market standard today. He also laid the foundation for the establishment of WITTENSTEIN alpha GmbH. Three decades on, the latest gearhead to emerge from the WITTENSTEIN alpha stable – the Hygienic Design series – underlines the company's role as one of the world's top innovators in the field of mechatronic drive technology.

The establishment of alpha getriebebau in 1984 was a direct consequence of this groundbreaking innovation. The alpha subsidiary, which was renamed WITTENSTEIN alpha GmbH fourteen years later, is now not only the company with the highest turnover within the globally successful WITTENSTEIN Group; it also ranks up among the leaders in the market for mechatronic drive technology.

Portfolio development consistently aligned to market needs

All engineering and entrepreneurial activity is guided by market demands regarding the product and service portfolio. Back in 1983, Dr. Manfred Wittenstein sensed the decisive technology shift in the mechanical engineering sector away from a single, central drive via a line shaft to decentralized servo actuators. At the same time, unconditional product quality was already an ingrained element of his company's philosophy. "Backlash-free quality", the original advertising

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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 1.600 employees. With a blend of dedication and enthusiasm, we set benchmarks – every day – worldwide.



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slogan, was a rigid maxim right from the very first SP gearhead series. The desired freedom from backlash – a precondition of maximum performance, a long lifetime and very quiet running – was realized by the team of engineers responsible with the help of planetary gear teeth that engaged with hitherto unknown accuracy. The next few decades brought many new challenges for designers of mechatronic drive components. To this day, ongoing optimization efforts are aimed at delivering more performance with no increase in weight or dimensions, reducing the amount of operating noise, extending the lifetime of mechanical components and systems and – especially topical in 2013 – developing drive solutions that make optimal use of energy.

Technology milestones

Continuous innovations throughout the last thirty years have formed the basis for numerous technology milestones at WITTENSTEIN alpha. The TP series, which premiered in 1994, was the market's first planetary gearhead to be equipped with an output flange. It was followed in 1999 by cymex[®], the first sizing software to allow mechanical powertrains to be designed entirely on a PC. In 2004, the alpheno[®] planetary gearhead offered clients the unprecedented chance to design made-to-measure, optimally specified gearheads for customized applications. Three years later, in 2007, WITTENSTEIN alpha introduced a new family of servo right-angle gearheads. They were followed in 2011 by the High Performance Linear System – a revolution in linear technology – as an integrated drive solution featuring significantly higher controllable and usable feeding forces plus the option of downsizing complete drive concepts.

Low-backlash planetary gearheads in hygienic design are the newest addition to this long list of technology milestones. They will be unveiled at the Hanover Fair 2013 as the only series of its kind worldwide. Their strict adherence to hygienic design principles makes them ideal for production and packaging tasks in the food processing and pharmaceutical industries, for example, where absolute cleanliness is a must.

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Unlocking future potential for mechatronic drive technology

Last but not least, the specialist know-how accumulated over the years as a result of WITTENSTEIN alpha's experience in a wide range of user industries and with global direct selling is leveraged to enable relevant innovation potential and market trends to be identified at an early stage. Today and in the foreseeable future, optimized power density and energy efficiency, increased specialization, more embedded intelligence in the drives, integrated drive solutions including smart accessories and an even higher level of consulting expertise are key priorities.

The WITTENSTEIN Group as a whole is consequently called upon to strengthen and perfect the expert know-how available in the individual Business Units if it is to remain a competent partner for customers in all areas of mechatronic drive technology.

Pictures:

1. The complete portfolio: all WITTENSTEIN alpha high-end planetary gearheads at a glance
2. Enduring benchmark: the world's first low-backlash planetary gearhead from alpha getriebebau back in 1983
3. The classic all-rounder among low-backlash planetary gearheads: the WITTENSTEIN alpha SP⁺
4. WITTENSTEIN alpha's brand new gearhead series in hygienic design – the first of its kind worldwide
5. A chronological overview: the success story of low-backlash planetary gearheads made by WITTENSTEIN alpha

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

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WITTENSTEIN AG – being one with the future

With around 1.600 employees worldwide and sales of €233 million in 2011/12, 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) is additionally represented in all the world's major technology and sales markets.

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