



The world's first low-backlash planetary gearhead in hygienic design made by WITTENSTEIN alpha:

Highly dynamic in hygienic production

At the forthcoming Hanover Fair WITTENSTEIN alpha GmbH will present the world's first low-backlash planetary gearhead that is suitable for hygienic production. Designed and certified according to EHEDG (European Hygienic Engineering & Design Group) rules to ensure optimal material resistance and cleanability, the new Hygienic Design series meets even the most stringent requirements of the food and pharmaceutical packaging industries, for instance. These coaxial, highly dynamic planetary gearheads are available in several different performance classes.

Outstanding robustness, resistance and cleanability were three key priorities when determining the housing design, choice of materials and processing techniques for the hygienic planetary gearheads.

Housing: robust and easy to clean

The housing is completely free of edges, dead spaces and gaps that could provide a breeding ground for bacteria or microorganisms and hence act as dirt traps. Moreover, like the adapter plate, it is manufactured from extremely robust stainless steel 1.4404 / AISI 316L. This low carbon steel is approved by the FDA (US Food & Drug Administration) for food contact. It offers excellent resistance to chlorinated fluids such as disinfectants containing hypochlorite or chlorinated alkaline foam cleaners where the oxidative component has a particularly strong effect on materials. All stainless steel surfaces of the Hygienic Design gearheads are electropolished with a roughness of either 0.8 $\mu\text{m R}_a$, as stipulated for food processing applications, or 0.4 $\mu\text{m R}_a$, which is the accepted standard in the pharmaceutical industry. This special surface treatment has two big advantages: it minimizes the risk of product residue adhesion and helps disinfectants or cleaning materials drain off after the exposure time without leaving any residues.

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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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PTFE seals: hygienic and FDA approved

The seals on both the motor and the output side of the Hygienic Design planetary gearheads are made from PTFE (polytetrafluoroethylene) – better known under the brand name Teflon – a chemically inert material that is resistant to heat as well as to a wide range of media. Owing to its outstanding surface properties and non-stick effect, PTFE conforms to the requirements of the FDA (Food & Drug Administration) and is ideal whenever hygienic cleaning is a must.

Proven gearhead design: validated performance

The design of the planetary gearheads for hygienic production – the teeth and the material, for example – is based on the tried-and-tested principle. All the performance and quality characteristics which customers traditionally expect from WITTENSTEIN alpha are thus also incorporated in the new Hygienic Design series.

Benefits for machine design and practical operation

WITTENSTEIN's Hygienic Design planetary gearheads integrate a whole set of benefits for food processing, beverage bottling and pharmaceutical production machines. The measures customarily resorted to in the fight against germs, microorganisms and dirt traps, like the enclosure or encapsulation of complete drive units, are often critical and can now be dispensed with. In addition to financial economies, this also provides increased design freedom, for instance for space optimized equipment with a smaller footprint. Thanks to the hygienic design, regular cleaning and disinfection of the gearheads, and indeed the entire machine, is much more straightforward, cheaper and – equally important from the product safety point of view – free from risk. Maintenance and servicing, too, profit from the easier access to the installed gearhead.

For the first time, low-backlash planetary gearheads in hygienic design open up new drive options for machinery and plant in the food processing, beverage bottling and pharmaceutical industries, with high dynamics and hygienic production no longer mutually exclusive.

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

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 (WITTENSTEIN bastian GmbH), 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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