



Added value through more performance, more variance and more ease of installation

Higher output torques and maximum speeds, a larger range of ratios and the option of adapting the gearbox design to the required lifespan – these are the essential improvements featured in the new SP⁺ and TP⁺ low-backlash planetary gearboxes in WITTENSTEIN alpha's "alpha Advanced Line" segment. Their increased power density enables optimal utilization of the motor capacity and hence even more dynamic processes. The outcome: shorter machine cycle times and higher productivity. Thought has also been given to easier installation: the mounting ring cuts out the time normally required for picking the screws, avoids mounting errors during commissioning, reduces the time for assembly and generally adds value.

The optimal utilization of the gearbox simultaneously results in significantly lower energy consumption on the motor side. Thanks to the continuously optimized machining processes for the teeth, both of these planetary gearboxes are now quieter than ever before: even at speeds of 3000 revolutions per minute, the noise intensity never rises above normal conversational level. Furthermore, new clamp connections in the form of slotted push-on sleeves on the input side mean higher safety requirements can be implemented. The combination of these benefits means the low-backlash SP⁺ planetary gearbox with output shaft and the TP⁺ low-backlash planetary gearbox with output flange are also an attractive alternative for retrofits and upgrades of existing machines.

Best in class now even better

For several decades now, the SP⁺ and TP⁺ low-backlash planetary gearboxes have been setting benchmarks in drive technology. The upgraded alpha Advanced Line gearbox series from WITTENSTEIN alpha now proves that even the best-in-class bar can still be raised. With up to 20 percent more torque, an almost 30 percent higher maximum speed, 6 decibels less operating noise and several additional binary reduction ratios – all packaged in the same compact housing – they push back traditional power density

November 28, 2017

WITTENSTEIN develops customized products, systems and solutions for highly dynamic motion, maximum-precise positioning and smart networking for mechatronic drive technology.



The low-backlash planetary gearboxes in the re-engineered SP⁺ (output shaft) and TP⁺ (output flange) series are positioned in the alpha Advanced Line segment.

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boundaries. That applies not just to the seven standard sizes but also to the application-specific HIGH SPEED and HIGH TORQUE versions.

Gearbox design now also reflects the service life

A precise, reliable and above all application-oriented gearbox design is vital in order to derive the full advantage from all of this. Once again, as a one-stop supplier, WITTENSTEIN alpha has exactly the right solutions. The web based SIZING ASSISTANT needs only a few parameters and other information to achieve the perfect gearbox solution. And when it comes to more detailed sizing tasks, the multifunctional cymex® 5 sizing software is the ideal tool. In the future, the new release will allow the planned useful life of the SP+ and TP+ gearboxes to be included in the design process. This ability to take account of the customer's required lifespan helps WITTENSTEIN alpha stand out from the market standard and creates a unique selling point for the SP+ and TP+ low-backlash planetary gearboxes.

Clever thinking: Special ring simplifies mechanical mounting

WITTENSTEIN has also addressed the functionality aspects – and come up with the mounting ring as an out-of-the-box feature not only for planetary gearboxes. A set of suitable screws are arranged ready for mounting in a lightweight foam ring in the hole circle on the TP+. These screws, which are coated with threadlocker, are then guided through the mounting ring and held in place correctly even in awkward mounting positions. The mounting ring is shipped complete together with the gearbox – so that the complicated calculation, purchase and provision of the necessary screws can now be dispensed with while the risk of assembly errors is eliminated. What's more, considerable time and money are saved when the gearbox is mounted in this way.

SP+ and TP+: High performance components in rack-and-pinion solutions

Due to their improved dynamics and increased torque and power density, the SP+ and TP+ planetary gearboxes are key components of WITTENSTEIN alpha's Advanced Linear Systems. The linear

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systems themselves are available as design friendly “preferred” configurations, which are optimized for each application: this combination of four components – gearbox, pinion, rack and lubrication system – is perfectly matched, so that both technical and commercial requirements are satisfied very efficiently.

Photos:

_01: The low-backlash planetary gearboxes in the re-engineered SP+ (output shaft) and TP+ (output flange) series are positioned in the alpha Advanced Line segment.

_02: The mounting ring

Texts and photographs in printable quality can be downloaded from presse.wittenstein.de.

WITTENSTEIN SE – one with the future

With around 2400 employees worldwide and sales of €339 million in 2016/17, WITTENSTEIN SE 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 six pacesetting Business Units with separate subsidiaries for servo gearboxes, 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 SE (www.wittenstein.de) is additionally represented in all the world's major technology and sales markets.

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