



New small servo motors for short-stroke movements at lightning speed

November 28, 2017

Travel speeds of up to 900 mm/s are now a reality thanks to the new “short stroke dynamics” variant of WITTENSTEIN cyber motor’s cyber dynamic line. This new option is available for all four sizes of the industrial grade small servo motors with integrated screw. Together with the servo controllers in the WITTENSTEIN cyber motor simco drive series, it can be configured as a complete small servo axis to meet even the highest dynamics requirements of short-stroke applications. It is typically used for positioning, joining, bending, gripping and dispensing in reshaping and handling applications, the semiconductor industry, packaging machinery or assembly automation.

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



The 100% stainless steel model with IP65 protection also opens up numerous interesting applications for all fully integrated linear actuators in the cyber dynamic line in the wet areas of manufacturing, packing, filling and bottling plants for food and beverage products.

The new “short stroke dynamics” variant enables travel speeds of up to 900 mm/s.

Servo actuators convince with process quality and reliability

The complete series of small servo motors with integrated screw is designed for use in highly dynamic positioning axes of machines or for installation where space is restricted. The new variant has been specifically optimized for rapid movements of up to 50 mm by modifying the ball screw drive. With a maximum travel speed of 900 mm/s, the “short stroke dynamics” version of the cyber dynamic line is a good alternative to pneumatic cylinders, even in the most highly dynamic applications, so that better, more reliable and more economically efficient machining processes can now be achieved. Unlike their pneumatic equivalent, the small servo motors are not only easy to connect to a higher-level controller. They also allow precise position control – without any retooling on the machine in case of format changes. Another advantage of this servo technology is that it is leakproof and far more energy efficient in normal operation – after all, compressed air is not only expensive to produce but a significant share of it is lost. Finally, the small servo motors with integrated screw are virtually maintenance-free and

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simultaneously quieter – two further benefits compared to pneumatics.

Small servo motors excite with industry grade design and compactness

All variants of the small servo motors with integrated screw enable highly optimized mounting solutions in the sizes with an outer diameter of 17 mm, 22 mm, 32 mm or 40 mm. The servo motor, spindle drive, linear guide rail and encoder system were designed by WITTENSTEIN cyber motor as a closed, highly integrated and ready-to-install unit – with the result that the moment of inertia is much lower than is possible, for instance, if the screw is simply attached to the servo motor. The strictly industry grade design was also a top priority. The complete drive is accommodated in a robust stainless steel housing with IP54 protection and can be mounted in any position.

Small servo drive systems score with connectivity and risk-free commissioning

The new small servo motors with integrated screw can be configured with simco drive servo controllers to form high-performance small servo axes. Multiple connectivity options are available for these solutions, which can be integrated in a higher-level controller via CanOpen, EtherCAT, Profinet RT/IRT, EtherNet/IP and now also SERCOS. In spite of this, this single-source system solution entails absolutely no interface risks.

Photos:



01_WITTENSTEIN_cyber_dynamic_line_family

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02_WITTENSTEIN_cyber_dynamic_line_Schnittbild

The servo motor, spindle drive, linear guide rail and encoder system were designed by WITTENSTEIN cyber motor as a closed, highly integrated and ready-to-install unit.



03_WITTENSTEIN_cybe_dynamic_line_BG32

The new variant has been specifically optimized for rapid movements of up to 50 mm at a maximum travel speed of 900 mm/s by modifying the ball screw drive.



04_WITTENSTEIN_cyber_dynamic_line_inox

The 100% stainless steel model with IP65 protection also opens up numerous interesting applications for all fully integrated linear actuators in the cyber dynamic line in the wet areas of manufacturing, packing, filling and bottling plants for food and beverage products.

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 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 SE (www.wittenstein.de) is additionally represented in all the world's major technology and sales markets.

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