



Nothing but the motor – made-to-measure drive technology

Focus on the rotor and stator, frameless, bearingless and encoderless, open to special options – this is the concept with which cyber[®] kit motors by WITTENSTEIN cyber motor GmbH create customized drive solutions for servo applications. These frameless, ready-to-install motors can be designed to meet specific requirements such as restricted installation space or very low moment of inertia. Furthermore, by varying the stator outer diameter, hollow shaft diameter, laminated core length and rotor variant, cyber[®] kit motors can be either power or torque optimized – for a performance range from 10 W to 200 kW with outer diameters from 19 mm to 440 mm. Produced using advanced machining and test methods in a highly specialized manufactory for small batches, these motors impress in practical use with exceptional precision and smooth running.

cyber[®] kit motors are based on permanent magnet synchronous motors like those manufactured in large quantities at the WITTENSTEIN Innovation Factory. They enable a compact design and hence easy integration. They also produce low ohmic losses, which can be dissipated if necessary using external cooling solutions. These frameless, ready-to-install motors can be adapted to any operating environment with numerous perfect-fit options such as sensors, mechanical interfaces or a special cable outlet.

Special manufacturing concept from one-offs to small series

WITTENSTEIN can draw on the extensive know-how and the means of production which are essential to manufacture frameless motors and their components. The small batch manufactory for the cyber[®] kit motors is embedded in the optimized production and logistics structures and processes of the Innovation Factory, where it profits from the substantial testing facilities and quality standards in place. Advantage can also be taken there of the special winding expertise: among other things, the coils are wound into the slots and treated by trickle impregnation by hand by highly qualified personnel. Motors with a copper fill factor that is optimally adapted to each application can thus likewise be manufactured in a technically and commercially efficient way in volumes as low as one.

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



The frameless motors in the cyber[®] kit motors series represent an easy-to-integrate solution concept for servo applications.

WITTENSTEIN SE

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Sizing tools guarantee an optimally designed motor

Two powerful sizing tools support the design of cyber[®] kit motors. The cymex[®] 5 software determines the required performance data for a particular motion task extremely accurately. A second program, which calculates the performance characteristics, specifies the details of these frameless, ready-to-install motors along with external determinants such as voltage, temperature, frequency and current.

Customized solutions and professional integration support

cyber[®] kit motors facilitate an enormous range of customized drive solutions. Measuring and testing technology, electric automation, semiconductor and electronics production, assembly and manufacturing machines, robotics, handling equipment and packaging technology are only a few of the typical applications. If needs be, WITTENSTEIN cyber motor can help customers integrate the frameless motors in their respective environments. This could take the form of on-site consulting services and support – or, alternatively, cooperative forward integration on the WITTENSTEIN premises, where the customer sends in all separately provided parts and WITTENSTEIN cyber motor assembles everything into a ready-to-install system, including all necessary testing.

Real applications on show at SPS IPC Drives

At the upcoming SPS IPC Drives from November 28 to 30, 2017 in Nuremberg (Germany), WITTENSTEIN cyber motor will show how a frameless motor has been integrated in a direct drive for thread forming tools in punching machines at EHRT Maschinenbau GmbH. A LiDAR sensor made by Velodyne will also be on display as another practical example. A cyber kit motor built into this laser scanner is responsible for the 360° rotation of the laser module. Please pay a visit to the WITTENSTEIN booth in Hall 4 (Stand 4-221).

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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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