



Perfect fit, not one size fits all

Mechatronic drive solutions for individual performance requirements

Motors with a customized design, tailored without compromises to individual applications – at the upcoming SPS IPC DRIVES from November 27 to 29, 2018 in Nuremberg, WITTENSTEIN cyber motor GmbH will show “perfect-fit” mechatronic drive solutions in the truest sense of the word. The optimized implementation of the motor rotor, winding and stator, the numerous different variations when it comes to mechanical and electrical integration and the adaptation for use in the most diverse environments lay the foundation for maximum performance and power density as well as extraordinary robustness, durability and economy from the outset.

In practice, when asked to come up with a concept that satisfies specific wishes and requirements, only a very few suppliers of so-called customized solutions actually succeed in getting away from the catalog or the product portfolio. Whereas simply adapting drives to fit an application almost always involves compromises, individual performance requirements can be optimally met by developing perfect-fit mechatronic drive solutions – like those offered by WITTENSTEIN cyber motor GmbH.

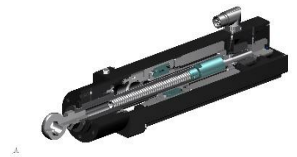
Motor design, integration concept, fitness for the environment – all perfectly tailored to fit the application

Define the requirements, assess the feasibility, develop a concept, build prototypes, verify their performance and prepare for serial production – these steps, carried out together with the user, result in customized drives that are a perfect fit.

The **motor design** phase, for instance, includes adapting the design not only of the stators and their laminations but also of the DC bus voltage, the winding and the rotor (reduced moments of inertia, arrangement and packing density of the magnets) to the particular application.

November, 2018

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



Individual fitting motors meet the requirements of the customers.

The **mechanical and electrical integration**, too, is characterized by high levels of flexibility and versatility. The basic design can range from a frameless motor to a complete drive module integrating a gearbox, coupling, screw, holding brakes and various other components. The input and output connections can be influenced by selecting the most suitable flange size and shaft version. And as far as the encoder is concerned, the solution space extends from a resolver to a fully digital motor feedback system in single-cable technology. The electrical connection can be made using open cable ends or connectors, or alternatively in the terminal box.

Finally, the concept for the motor and drive solution must take account of the specific **environment** in which it is to be used. Owing to the wide choice of materials available from WITTENSTEIN cyber motor, it is possible to build motors with the right IP protection for use in high or low-temperature applications, for example, as well as in vacuum or cleanrooms, hazardous or radiation affected areas and machinery and equipment for processing, filling and bottling food and beverage products – if necessary, with a special hygienic design.

Perfect-fit design – perfect in use

The ability to design individual, perfect-fit motors combining this kind of technological depth and application breadth is what sets WITTENSTEIN cyber motor apart from most other suppliers of mechatronic drive technology. This claim is underlined by concrete examples like heavy-duty torque multipliers, transfer units in glass production, thread forming tools in punching machines and workstations in high speed bending machines.

The feedback from users is overwhelmingly positive. Among other things, WITTENSTEIN's perfect-fit, power dense motors give them a technology lead and a competitive advantage, pave the way for a successful technology shift from servo to pneumatic or improve the performance data of their machines. For the majority of customers, the option of a perfect-fit motor design, with manufacturing and assembly performed by the project partner in Igersheim, promises significant economic benefits – after all, they would otherwise often be obliged to invest a substantial sum in production and assembly capacity of their own and bear the interface and performance risks, from which they are effectively shielded by WITTENSTEIN's "everything from a single source" concept.

WITTENSTEIN SE

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01-wcm-linearaktuator-aufbau

The technology shift from pneumatics to servo can be successfully implemented using precisely fitting motors.



02-wcm-cyber-kit-motors

One of the WITTENSTEIN Group's main areas of expertise is the design and construction of electric motors.



03-wcm-kundenspezifisch

WITTENSTEIN cyber motor entwickelt Antriebe, die komplett auf die logistischen, technischen und kommerziellen Anforderungen des Kunden zugeschnitten sind.

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

WITTENSTEIN SE – one with the future

With around 2600 employees worldwide and sales of €385 million in 2017/18, 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, nanotechnology 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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