



Frameless servo motors now also in large

New cyber® kit line large from WITTENSTEIN cyber motor enables high performance OEM drive solutions

The new frameless servo motors in WITTENSTEIN cyber motor's cyber® kit line large family are designed for installation directly in OEM machines and specially adapted for applications with high performance requirements. Not only are they wear-free and backlash-free; they also convince with high torque density, energy efficiency and robustness. The compact and highly integratable motor design of the cyber® kit line large – at once frameless and bearingless – provides considerable flexibility for developing drives with a large hollow shaft diameter. Among other things these frameless, torque-optimized motors are proven as highly dynamic drive solutions in robotics, actuators and particularly machine tools.

The new cyber® kit line large is the perfect complement to the successful cyber® kit line small. OEMs can now design frameless servo motors offering different dimensions in performance – all from one source and tailored to individual kinematic requirements as well as to specific mounting conditions and environments – and integrate them directly into their machines. They can also take advantage of WITTENSTEIN cyber motor's consulting expertise to select the motor that best fits their needs. From the design stage onward, optimum sizing safety is guaranteed.

Consistently modular concept

The modular concept of the cyber® kit line large provides maximum design flexibility plus adaptability to specific tasks and conditions. For example, the frameless servo motors in the 560 V voltage class are available in four sizes from 290 mm to 530 mm as well as in various lengths from 50 mm to 200 mm and with four hollow shaft diameters from 220 mm to 420 mm.

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



cyber® kit line large –
Frameless servo motors from
WITTENSTEIN cyber motor

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The latter allow cables of, say, gripping elements, sensors and light guides or pneumatic air and vacuum tubing to be laid in a space-saving way inside the machine. Integrated PT1000 and PTC temperature sensors permit thermal condition monitoring.

Thanks to the very high copper fill factor of the stator, the maximum torque of these torque-optimized motors ranges from 1000 Nm to more than 9000 Nm. Speeds of up to 250 rpm are specified. Whereas the cyber® kit line large works with all standard servo drive makes, cyber® kit line small motors are additionally compatible with the compact servo drives in the cyber® simco® drive 2 product family. They enable highly dynamic drive applications to be realized with higher output ratings.

Robust and energy efficient

The one-piece, segmentless motors are fully potted, laying the foundation for their enormous robustness and longevity. Even at maximum power, after reaching the specified winding temperature, the thermal effects on adjacent components remain minimal. The improved heat dissipation – assisted if need be by an optional, closed cooling jacket – means OEMs can be sure of getting a motor with the required industrial-grade design, reliability and durability. Optimal energy efficiency was likewise a key priority: the nominal current which is necessary for operation is up to 15 percent lower compared to other solutions available in the market today – and power loss is down by as much as 25 percent.

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Pictures: (source: WITTENSTEIN SE)



01

cyber® kit line large – frameless servo motors from WITTENSTEIN cyber motor in four sizes: 290, 360, 420 and 530 mm



02

cyber® kit line large: These high-performance, direct drive motors are the ideal solution, e.g. for machine tools, robotic applications and actuators.

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

WITTENSTEIN – one with the future

With around 2800 employees worldwide and sales of €373 million in 2020/21, WITTENSTEIN SE enjoys an impeccable reputation for innovation, precision and excellence in the field of cybertronic motion – not just in Germany but internationally. The Group possesses exceptional expertise for the mastery and further development of all technologies relevant to mechatronic drives and comprises six innovative Strategic Business Divisions. We develop, produce and sell products such as high-precision servo drives and linear systems, servo systems and motors as well as cybertronic drive systems for many areas of application including machine and plant construction, aerospace or oil and gas exploration. Nanotechnology and software components round off the portfolio. With 25 sites in more than 45 countries, the WITTENSTEIN Group (www.wittenstein.de) is represented in all major technology and sales markets.

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