

November 18, 2021

## Press Release

### **maxon adds another dimension to robotic drives with a new frameless DC motor.**

**maxon presents a new frameless brushless DC motor with matching encoder that really comes into its own in dynamic applications. At the same time, the DC motor specialist is presenting a new series of ECX pancake motors for a wide range of robotics applications. This offers several solutions for design engineers grappling with tight spaces.**

Innovative DC motor concepts are the answer to growing market requirements for dynamic response, compactness, and power density. With the EC frameless DT, the drive specialist maxon presents a solution that really packs a punch. The DT50 is the precursor of a new product family developed specifically for dynamic movements. The brushless DC motor with its frameless concept can be easily integrated into a wide range of applications by design engineers. It really comes into its own here in applications where speeds can change in an instant, in collaborative robots or exoskeletons, for example. When installed, the EC frameless DT50 effortlessly reaches a nominal torque of over 500 mNm at a nominal speed of 4,000 rpm. This is despite a stator outside diameter of only 50 mm. At the same time, the new winding technology enables a very short motor length with a very large hollow shaft of 28 mm.

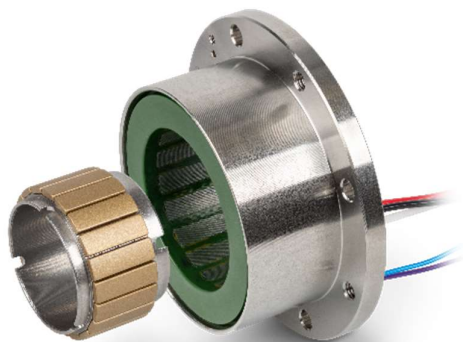
The TSX-MAG encoder completes the EC frameless DT50. It is a new through-shaft encoder that is not installed directly on the motor axis (off-axis installation). This gives engineers great freedom when it comes to design. The encoder can generate both Hall signals and incremental signals, which allows field-oriented commutation of the motor. More versions of the TSX-MAG and additional drive combinations will follow soon.

#### **High-torque external-rotor motors**

maxon presents another innovation in the area of brushless DC motors: the ECX flat or pancake DC motor product family. These external-rotor motors can be configured online and are optimised for maximum performance thanks to the special winding technology as well as segmented magnets. The ratio of torque to weight and size is second to none, and is perfect for UAV (unmanned aerial vehicle) and robotics applications. The iron-wound motors will be available with diameters of 22 mm, 32 mm, and 42 mm, each in a short version and a long version. The short versions are just 14 mm, 16 mm or 21 mm in length. The brushless DC motors are thus perfectly tailored to compact drive solutions, which need a high torque. In addition, all variants will also be available with integrated encoders or with integrated speed controllers as a complete drive system.

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The press release is available on the internet at: [www.maxongroup.net.au](http://www.maxongroup.net.au)



*The EC frameless DT50*  
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*The new brushless DC motors*  
*ECX 22/32/42 flat*  
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### **The Swiss specialist for quality drives**

maxon is a developer and manufacturer of brushed and brushless DC motors, as well as gearheads, encoders, controllers, and entire mechatronic systems. maxon drives are used wherever the requirements are particularly high: in NASA's Mars rovers, in surgical power tools, in humanoid robots and in precision industrial applications, for example. To maintain its leadership in this demanding market, the company invests a considerable share of its annual revenue in research and development. Worldwide, maxon has more than 3000 employees at nine production sites and is represented by sales companies in more than 30 countries.