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The RE 30 EB 15 W maxon DC motor for fine rotary motions.

maxon windings and precious metal brushes generate higher torque.

Haptic applications are well known in medical engineering, robotics, and aeronautics. For example: An active helicopter sidestick generates forces that provide tactile feedback to the pilot of a conventional system. Such applications require a special drive. maxon's ironless winding and precious metal commutation were predestined for these requirements.

The new – big and powerful – RE 30 EB precious metal brushed motor is a special and rare drive, and for certain applications, it's exactly what's needed. Precious metal brushes are known for ensuring low, constant contact resistance over the entire service life, a characteristic that makes control far easier. This motor also features a low start-up voltage, even after a long period in standstill. With a rated torque of 53 mNm, the motor is very powerful despite the precious metal commutation, providing twice the power of an RE 25 EB. In addition, there is minimal high-frequency interference. These are all advantages that are only possible with ironless windings and precious metal brushes.

The development of this motor was initialized by maxon customers. As a result, the motor is specifically designed for haptic applications such as surgical robots. This means the motor can also be used as a highly-sensitive sensor, acting as the sense of touch for registering mechanical resistance.

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Figure 1: RE 30 Ø 30 mm, precious metal brushes, 15 W



Figure 2: RE 30 EB with MR encoder.



Figure 3: The centerpiece of the maxon motor is the globally patented ironless winding, System maxon: This motor concept has some very specific benefits, including low interference and no magnetic cogging. The 90% efficiency is unrivalled by other motor systems.

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