Media Release

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Very small brushless DC Flat motor – in space.

10mm Diameter brushless flat motor supplied by maxon motor Australia with specific customisations for use in space. An example of the extreme miniaturisation possibilities for test, research and exploration robotics.

This brushless DC flat servo motor (commonly referred to in Australia as a pancake motor and globally as a BLDC motor) has an outer diameter of 10mm and a motor length of just 3.25mm. The motor is capable of a top speed of 22000 rpm based on a 4870 rpm/volt constant (KV). Brushless flat motors are characterised by a high torque per volume and normally have low speeds due to a “lever arm” effect, this tiny motor bucks this trend achieving speeds normally only possible from traditionally shaped brushless motors. The motor is available with and without hall sensor feedback to broaden the motor control miniaturisation possibilities.

The emerging swarm robotics trend, miniature spacecraft and micro satellites have an increasing demand for tiny DC motors that implement their gyroscopic effects to orientate the devices. Shown here is a highly customised version that has been adapted for use in outer space. In particular, a vacuum capable lubrication Braycote 601EF has been used in the ball bearings and the shaft has been specifically modified to suit the inertial load.

Contact maxon motor Australia in their Sydney office for detailed assistance with motor customisation.
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The media release is available on the internet at: www.maxonmotor.com.au

Very small Brushless DC flat motor © maxon motor.

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