

Brushless motor with encoder and gear. Customised to perfectly match critical servo motor requirements.

Requiring up to 22Nm of intermittent torque with only a tiny amount of available space, only maxon motor could custom build the perfect solution for this application. The brushless DC motor contains an internal 1024cpt encoder and is only 22mm long.

Outrunner style pancake motors have an external rotor which offers both advantages and disadvantages. The brushless DC motor has the rotor magnets mounted on the outside of the stator giving the motor more available torque via the additional distance between where the force is produced and the shaft. Essentially, more leverage. However, having an external rotor leaves the rotating mass exposed to the operating environment where it could potentially be impacted upon and create imbalances on the motor.

maxon motor were able to combine a unique combination of a flat brushless DC motor with an internal 1024 count per turn encoder with a ceramic planetary gearhead to meet a customers' application requirements, though the exposed rotor was a concern for the engineer. By re-designing the front mounting flange of the motor, maxon were able to build a custom rear cover for the motor to protect it and stay within the maximum 43mm available diameter. This must be designed around the thermal requirements of the motor when working in the application environment under the specific loads and duty cycles.

Customisation processes like this for specific requirements then become available for other applications and eventually catalogue components. The motor is now available for system voltages from 12V to 48V with internal encoders from 256 counts per revolution to 2048 counts. There is a ventilated version for high power density, a standard version and an enclosed version.

Contact maxon motor Australia for application assistance. + 61 2 9457 7477.

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The media release is available on the internet at: www.maxonmotor.com.au



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maxon motor Australia Pty Ltd

Unit 1, 12-14 Beaumont Road

Mt Kuring-Gai NSW 2080

Tel: +61 2 9457 7477

Fax: +61 2 9457 8366

info.au@maxonmotor.com

www.maxonmotor.com.au

Twitter [@maxonmotoraust](https://twitter.com/maxonmotoraust)