Small DC servomotors for Aviation applications.

A small DC servomotor specifically designed for the high vibration and high reliability requirements for aircraft applications.

Amongst other features, it is the scaled design of this new DC servomotor, gearbox and encoder combination that contribute to this motor combinations particular suitability for Aviation applications. For a high torque DC motor requirement first we start at the load and work backwards with the shaft, gearing, motor, encoder and then the control method to create a servo gearmotor that is unique and most suited to the application. The newest range of DC motors from maxon motor, the DCX, allows the design engineer to individually configure the components in this fashion. For Aviation, especially for an application within a propeller or engine bay the motor is exposed to high vibration that requires a significantly robust shaft and bearing system. But the strength of the drive system often comes at the expense of the servo gear motors mass. With the new DCX configuration the gearhead shaft and bearing are optimised for high torque and vibration requirements at the output stage, while the input stage is stepped down in diameter as it only has to transmit lower torque levels – reducing the mass. Similarly the encoder is smaller at only 10mm in diameter and weighs less than 5 grams. Producing the most torque possible from the lightest motor system possible. Further reliability is achieved with Laser welding being used throughout the assembly process, at the bearing system, between the gearhead stages and even to assemble the motor and gearhead together.

For assistance customising a servomotor and gearhead combination contact maxon motor Australia + 61 2 9457 7477.

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