

Portescap Announces Expansion of Design Capabilities to Include DO-160G Requirements

Portescap is excited to announce that its standard motors can now be designed to meet the requirements of RTCA DO-160G, an aviation industry standard that outlines environmental test conditions for assessing the equipment and systems used in aircraft. DO-160 standards ensure that all devices used within aircraft can withstand the environmental conditions that might be encountered during operational life, including temperature, shock, and vibration.

As miniature electric motors are a critical component of the aircraft's electromechanical systems, including propulsion and flight control, they are required to meet the strict performance qualifications outlined in DO-160. Portescap performed DO-160 standard tests on its products internally, as well as externally at an accredited lab. Additional separate Highly Accelerated Life Testing (HALT), which combines shock and vibration with temperature fluctuations, was completed to understand what motor modifications were needed to ensure compliance.

Based on the results, Portescap has expanded its motor design capabilities and is able to fully customize its motion solutions to meet DO-160 standards. Examples of customizations that have been implemented include special lubricants suitable for temperatures down to -55°C and across the operating range in both the bearings and the gearbox; new manufacturing methods to ensure survivability against shock and vibrations, such as laser welding the bearings to the shafts to improve motor reliability; selection of corrosion-resistant materials for machined components like the sleeve, end bells, and shaft; and conformal coating added to electrical components as protection from moisture.

“Portescap has rigorously tested our products to meet the most severe requirements of DO-160 and updated our designs where necessary. These modifications can be applied to our standard COTS (commercial-off-the-shelf) catalog product line to allow for faster and lower cost development than a white page design,” said Julian Del Campo, Business Development Manager for Aerospace and Defense. “This gives our customers the much-needed peace of mind that Portescap’s motors and accessories will perform reliably in critical aerospace applications.”

For more information on Portescap’s DO-160 compliance or its customizable motor portfolio, reach out to portescap.sales.america@regalrexnord.com.

About [Portescap](#)

Portescap offers the broadest miniature and specialty motor products in the industry, encompassing coreless brush DC, brushless DC, stepper can stack, gearheads, digital linear actuators and disc magnet technologies. Our products have served diverse motion control needs in a wide spectrum of applications including medical, life science, instrumentation, automation, aerospace and commercial for more than 70 years.

Portescap has manufacturing centers in the United States and India and utilizes a global product development network with research and development centers in the United States, China, India and Switzerland.