

• APPLICATION NOTE • AC60-LP Low-Profile Aircraft Scales

Weighing During Testing of Scaled Composite's Stratolaunch Aircraft

During aircraft development, airframe manufacturers measure the weight and balance of empty, fully fueled, and partially fueled aircraft after testing missions. Working around fueled aircraft requires certified equipment to ensure fire prevention safety, and Scaled Composites looked for these features for the aircraft with the largest wingspan in the world, Stratolaunch, in development for air-launched space operations.

The AC60-LP™ Low-Profile Platform Scales have the high-capacity weighing ability for large aircraft, coupled with the certification required by the National Electrical Code (NEC) to weigh in aircraft hangars.

Weighing the Stratolaunch aircraft occurs during development and testing, with empty, full, or partially-filled fuel tanks. Intercomp aircraft platform scales maintain intrinsically safe certifications by a Nationally Recognized Testing Laboratory (NRTL) to meet the safety requirements for weighing in aircraft hangars. This allows aircraft with fuel or fumes present, or in other operations where they may be potentially present in paint hangars or defueling operations to meet either US or international safety standards for electrical equipment.

Stratolaunch and Scaled Composites evaluated several platform scale systems before selecting Intercomp's AC60-LP $^{\text{\tiny M}}$ low-profile platform scales. These scales are commonly used for weighing narrow and widebody aircraft, or even the unique dual-fuselage 28-wheel configuration the Stratolaunch presents to their weighing team. The structure of the aircraft required multiple CG calculations for the fuselages, and the aircraft as a whole, with the one-of-a-kind gear configuration.

The scale system features represent a culmination of experience Intercomp incorporated into the next generation of aircraft platform scales. With integrated wheels allowing movement without ever having to lift the scales, they are deployed in less than 10 minutes to weigh even the largest of aircraft. The low-profile height of the scales and spacers allows Scaled Composites to deploy and slide the scales beneath the wheels when the airframe is on jacks. As mentioned, the intrinsically safe certification of the scales meets US and international safety codes for weighing in hangars, and is accomplished by incorporating fully-electronic load sensing technology and processing.

Stratolaunch also selected Intercomp's ACWeigh™ software with wireless communication to the scales, simplifying operation for weighing and record generation via wireless communication to the scales.

Scaled Composites has been providing unique solutions to the aerospace industry since 1982. Some of the world's most distinctive and notable projects have come from their location at the Mojave Air and Space Port in California.

For more information about Scaled Composites: https://www.scaled.com/



Low Profile AC60-LP™ scales are capable of weighing a wide range of aircraft, including the Stratolaunch.



Scales, along with custom spacers, for a unique main gear configuration.



Fully-electronic, intrinsically-safe scale technology meets US and International safety standards.