

Weighing Loaded and Unloaded Aircraft For Flight Testing

Airframe manufacturers conduct weight and balance testing that exceeds typical requirements that MROs and commercial aircraft operators use in their operations. In this example, SAAB AB performed weighing of aircraft prior to and during flight test campaigns, taking advantage of the wide range of capabilities Intercomp platform scales offer in commercially available scales.

“Scales had to have sufficient range and accuracy to weigh complete aircraft with and without fuel onboard to allow weighing before and after each flight.” –Mass Properties Engineer, SAAB AB

Though most weighing occurs in a de-fueled, empty state, this example of aircraft weighing required gathering data within the full weight span during flight tests. Ranging from Maximum Take Off Weight (MTOW) to Basic Empty Weight (BEW), SAAB required aircraft platform scales to meet several criteria:

- **Sufficient capacity range to weigh aircraft with and without fuel**
- **Accuracy of readings across capacity range**
- **Low-profile scale and ramp height for towing**
- **Known supplier within the industry**
- **Safe operation to weigh fueled aircraft**

These criteria were met with Intercomp's AC40-LP low profile aircraft scales. With GaugeSense™ technology, the fully-electronic platform scales use strain gauge technology maintaining accuracy across the capacity range of the scales. Weight and balance engineers rely on this technology as it is insensitive to load positioning, adjusts immediately for variations in temperature or level, and maintains a high degree of accuracy and repeatability.

Now available in ATEX certified Intrinsically Safe models, Intercomp aircraft scales can be used in environments where fuel and fumes might be present. This certification further increases safety margins in operations around aircraft.

Intercomp has platform scales with capacities ranging up to 80,000lb (40,000kg), capable of weighing aircraft ranging from UAVs to the Airbus A380. For decades, the majority of airframe manufacturers, airlines, and maintenance centers have relied upon Intercomp industry-leading weight and balance equipment for aircraft weighing operations.



Aircraft weighing: dual wheel configuration with AC40-LP aircraft platform scales



Low-profile scales enable short towing distances



Intercomp scales have been evaluated and certified “Intrinsically Safe” by a qualified testing laboratory