

Weighing the Global Hawk in Extreme Conditions

Deployed from bases throughout the world, RQ-4 Global Hawk UAVs provide a platform for a wide range of missions. Weighed immediately prior and post-flights, the platform scales operate in environmental conditions not typical for aviation scales. To accomplish this, Northrop Grumman and the Air Force approached Intercomp for modified scales to perform the task.

Weight and balance information is mission critical for the RQ-4 aircraft. Scale requirements included intrinsic safety, environmental sealing for dust, water, weather, and load cell performance for accuracy and repeatability within a very wide temperature range.

The RQ-4 program has used Intercomp [AC15-LP™/AC40-LP™](#) scale systems for many years throughout the history of the aircraft. With deployments at bases in hot, dusty desert environments, extreme cold northern hemisphere locations, and high-humidity saltwater conditions, platform scale performance and durability needs are unlike almost any prior scale requirements. Development, testing, and modification of Intercomp [low-profile platform scales](#) provided a scale system that can perform in these adverse conditions.

Modified from existing FM Approvals® [intrinsically safe certified scales](#), the low-profile scales were subjected to a variety of MIL-STD-810G testing by independent labs for immersion, dust infiltration, low and high temperature conditions, and salt water induced corrosion. The enhanced scales not only had to successfully pass the tests, but also continue to provide accurate and repeatable weighings within the test criteria.

With the aircraft scales based on strain-gauge load sensing technology, and prior certification for intrinsic safety in hazardous environments, Intercomp developed platform systems that met the criteria that NGC and the Air Force set forth for the scale systems to operate and perform in extreme environments. This allows for use of the scales to support the RQ-4 wherever and whenever it is called upon for deployments and missions.

To learn more about Intercomp Low-Profile aircraft scale systems, visit <https://www.intercompaviation.com/platform-aircraft-scales>

To learn more about the RQ-4 UAV Global Hawk, visit [Global Hawk - Northrop Grumman](#)



The current model of the RQ-4 with single-wheel NLG and MLG is used in missions throughout the world.



Intercomp scales feature enhanced coating, sealing, and corrosion proof treatments for environmental conditions.



The scales utilize the standard fully-electronic, intrinsically safe scale technology used throughout the Intercomp aircraft platform scale family

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