

MW900

Single Axis Moment Weight Scale



Description

Raptor Scientific manufactures the most accurate moment weight scales in the world.

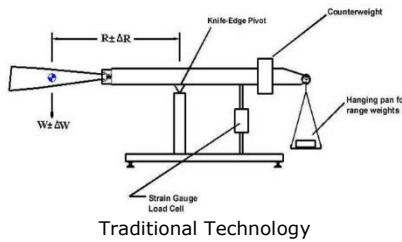
Our model MW900 is a single axis, high accuracy moment weight scale. It is our most popular model, dedicated to a wide range of small to medium size blades.

Basic Concept

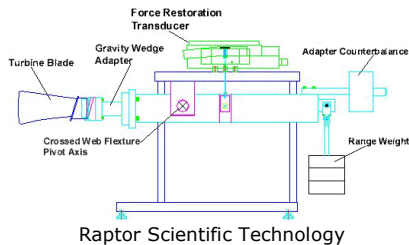
Most manufacturers use knife-edge pivots and strain gauge load cells.

Accuracy is limited by the dynamic range of load cells;

knife-edge pivots are easily damaged and wear over time.



Raptor Scientific instruments use crossed-web flexure pivots and force restoration technology, resulting in instruments which are at least 10 times more accurate than other methods and are also more resistant to damage in production environment.



Radius Compensation

Most moment weight scales require that the blade be fixtured

at the exact same radius as the blade has in the engine. Since our system measures both weight and moment, the computer can compensate for blade radius.

Adapters

Raptor Scientific Gravity Wedge Blade Adaptors (patented technology) are more repeatable and easier to use than any other style of adaptor. The unique slanted aperture guides the blade into position and the lower wedge clamps the blade at its Z-plane. Repeatability of better than 1 part in 100,000 is obtained with these adaptors.

Blade Distribution Software

After all the blades have been measured, our blade distribution software will distribute the set in a pattern that minimizes the overall rotor unbalance. The unbalance of the hub can be entered and the blades will be distributed to correct for the hub unbalance.

Technical Specifications – MW900 Single Axis Moment Weight Scale

Maximum Radial Moment That Can Be Measured	900 oz-in
Maximum Weight of Blade and Tooling	30 lb
Maximum Combined Moment of Blade and Tooling	3,000 oz-in
Readout Resolution	0.002 oz-in
Readout Sensitivity	0.01 oz-in
Linearity	0.03% of blade value
Mounting Plate Radius	5.000 inches
Mounting Plate Dimensions	A2499019