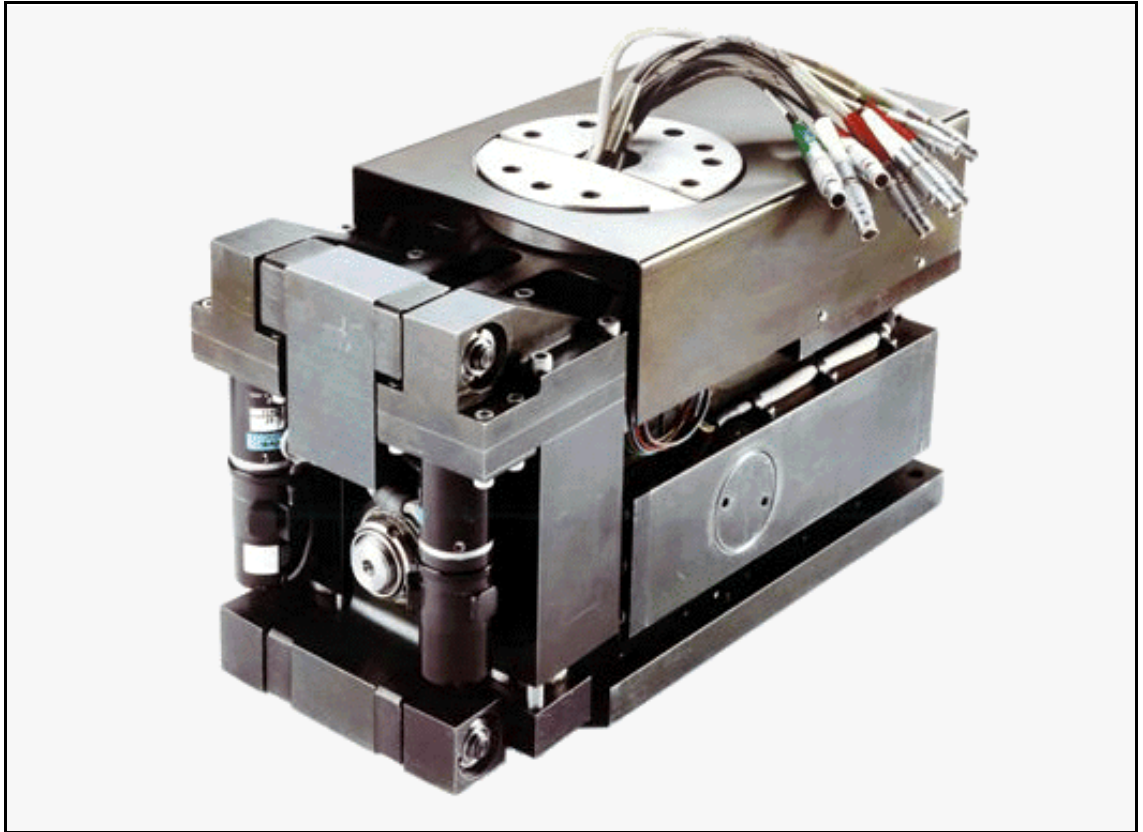


INTEGRATED BALANCE AND MODEL MOTION SYSTEM



FEATURES:

- Fully automated motion system
- Model pitch, roll and yaw angle adjustment
- 6~component internal strain gauged balance
- Motion axes intersect at one common point
- High positional accuracy and repeatability
- Low deflection
- Compact system
- Complete system calibration
- On-board balance signal conditioning
- Limit switches prevent over travel

The AEROTECH Integrated Balance and Model Motion System is a compact unit which is designed to be installed within the cockpit area of the model. Specifically designed actuation systems are assembled around the latest generation of Internal Strain Gauged Balance to provide a system that measures the aerodynamic load, as six separate components, and can also move the model in roll, pitch and yaw, rotation about the X, Y and Z axes respectively.

Technical Summary:

The Balance load ranges and Model Motion criteria are considered and determined during the design phase in conjunction with the user's space envelope. Typical values of a system suitable for a 50% model are shown below for guidance only.

Balance Component		Load Range
Fx	Drag	600N
Fy	Side Force	±500N
Fz	Down Force	3000N
Mx	Roll Moment	±150Nm
My	Pitch Moment	±600Nm
Mz	Yaw Moment	±250Nm

Motion Axis		Motion Range	Rated Speed
Ax	Roll	±3° in minimum steps of 0.01°	0.5%/sec
Ay	Pitch	±2° in minimum steps of 0.001°	0.2%/sec
Az	Yaw	±10° in minimum steps of 0.01°	0.4%/sec

System size: 410mm long x 190mm wide x 230mm high

System weight: 70kg



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