



# Aerospace Wind Tunnel Model Support System

## Description

Design and manufacture of a tripod, bipod and single strut model support system for a Mach 0.3 aerospace wind tunnel, with a 3 x 4 m working section.

The system positions and moves the model to within 0.25 mm by electro-mechanical actuators with encoder feedback., Transferring loads of up to 20 kN to the support balance.

Drag on the system is reduced by the use of rotating glass fibre reinforced plastic aerodynamic fairings.



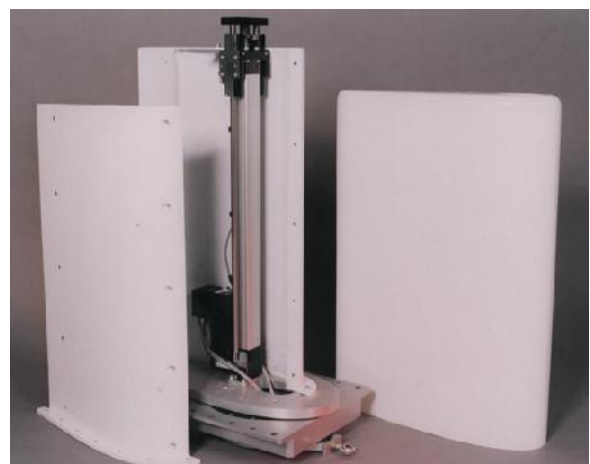
*Tripod Aircraft Model Motion System*

## Specification Summary

- Mach 0.3 aerospace wind tunnel
- Working section of 3 m x 4 m
- 20 kN lift
- 10 kN drag loads
- Tripod, bipod & single strut configurations
- Positional accuracy = +/- 0.05 degrees
- Variable height, pitch and yaw positions
- Electro-mechanical actuators with encoder

## Disciplines Used

- Composites design & analysis
- Mechanical & electro-mechanical design
- Stress & vibration FEA
- Project management
- Manufacture & assembly
- Test & commissioning



*Rear Extended Fairing*