

Aerodynamic Test Design and Manufacture



Introduction

The Design and Manufacture group produce models and rigs for use in our test facilities, as well as offering a specialist service to other internal, and external customers.

The in house design team uses state of the art CATIA tools and have wide experience designing novel and innovative concepts.

Manufacture is co-located with design and has a wide range of conventional metal and woodworking machines including 3D N/C millers, solid sink and wire eroders.

The Design & Manufacturing Group has access to on-site rapid prototyping machines, with extensive knowledge in their application to novel manufacturing scenarios.



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Capabilities

The Design and Manufacture team are highly experienced in turning customer concepts into reality. An array of manufacturing techniques are utilised in producing a wide range of highly complex models in timber, metal and composite materials. These include the following:-

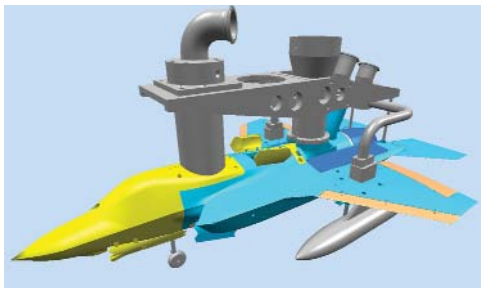
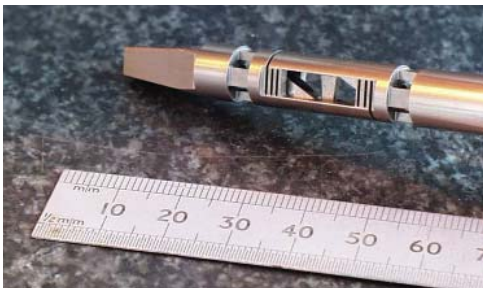
- Wind Tunnel Models suitable for assessing the following
 - Stability and Control
 - Intake Performance
 - Jet Effects
 - Inlet Effects
 - Balances for use in the above
- Additionally, the design and manufacture team has expertise in producing
 - Hot Gas Ingestion Models
 - Complex nozzles for use at high temperature
 - Large Scale Ducts
 - High fidelity models for test in other spheres of the aerospace industry
 - Specialist Rigs
 - Pressure Systems

Techniques

- CNC programming
- Data handling and transfer
- Rapid prototyping application
- Stress reporting
- Solid modelling
- Surface definition

A well equipped machine shop allows the use of traditional and advanced manufacture techniques. These include:

- Conventional milling, turning and grinding
- Fully equipped wood working shop including N/C milling
- Glass Reinforced Plastic lay-up and spray facility
- N/C wire erosion
- N/C solid sink spark erosion
- N/C milling up to 2.5m
- CAD driven Co-ordinate Measuring Machine



For more information contact:

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