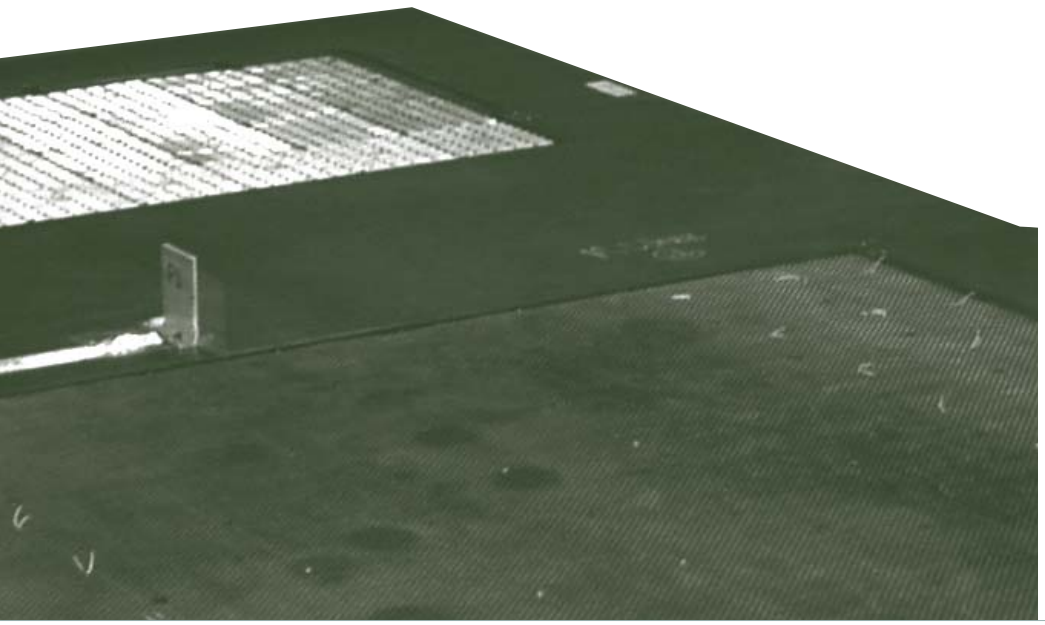
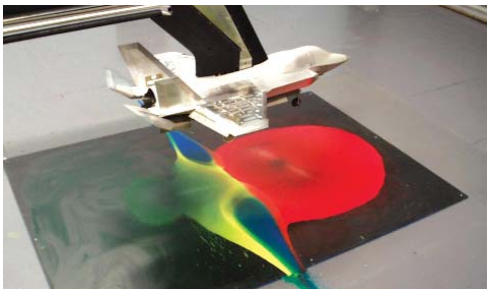
Aerodynamic Test
5.5m Low Speed Wind Tunnel



Introduction

The 5.5m Low Speed Wind Tunnel (LSWT) was designed specifically for the investigation of powered lift configurations, but because of the large test section has since proved to be eminently suitable for high incidence and rotary derivative testing. Models are typically sting mounted on an internal strain gauge balance. Development of the tunnel control systems has resulted in a highly automated, high productivity facility. In recent times the tunnel has been extensively used to develop Advanced Short Take Off and Vertical Landing (ASTOVL) configurations.

The Adjacent Static Test Laboratory (STL) is used for mass flow and thrust calibrations on associated test hardware.



BAE SYSTEMS

Aerodynamic Test
5.5m Low Speed Wind Tunnel

5.5m Low Speed Wind Tunnel

Prime Test Types

Stability & Control Measurements
Powered Lift & Inlet Effects Investigations
Intake Models

Performance

Speed range	4 to 19 m/s
	Open return, closed working section, continuous running
	Ambient temperature & stagnation pressure

Working Section

5.5m wide x 5.0m high Sting mounting system.

Sting Support Mechanism

Incidence range -25° to +85°
Sting carriage height variable 3500mm from tunnel floor
Sideslip range +/- 30°

High Pressure Air Supply

Supply pressure 4,200 kPa max
Four independently regulated, high pressure air supplies
Mass flow 4kg/s continuous or 8kg/s max

Test Support

In house wind tunnel design and manufacture capability.

Data Acquisition

The facility contains a flexible data acquisition system that can accommodate a wide variety of sensors.

Compact pressure scanning hardware is also available that can provide over 1000 pressure measurements.

Data Processing

In house software support.

Outputs

Data	User friendly plotting software.
Flow visualisation	Various techniques.

For more information contact:

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